United States
Department of
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Food Stamp Program Participation Rates: August 1985

Current Perspectives on Food Stamp Program Participation

Titles in this series:

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August 1985
(April 1990)   Pat Doyle

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Food Stamp Program Participation Rates: August 1985

Pat Doyle

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EXECUTIVE SUMMARY

Policymakers are interested in the extent to which the Food Stamp Program (FSP) is serving its target population, as well as which subgroups are more or less likely to participate in the program. This report is the second in a series of reports providing estimates of participation in the FSP using more accurate data on eligibles and participants than has previously been available.

The **FSP** participation rate is the ratio of the number of persons (or households) participating in the **FSP** (or the actual benefits paid to participants) to the number of persons (or households) who are eligible for the program (or the total benefits payable if all eligible households participated). The estimates presented in this paper indicate that, in the 50 states and the District of Columbia in August 1985, the following were true:

- 64 percent of the eligible individuals participated in the FSP;

- 59 percent of the eligible households participated in the program; and

- participating households received 75 percent of the benefits payable had all eligible households participated.

The higher rate for individuals than for households implies that larger households were more likely to participate than smaller ones. The finding that the benefit rate was higher than the household rate implies that households eligible for larger benefits were more likely to participate than households eligible for smaller benefits. These participation rates, while not strictly comparable to earlier flndings due to methodological differences, are approximately the same as those reported for 1984 (Doyle and **Beebout,** 1988).

ESTIMATES OF PARTICIPATION BY SELECTED DEMOGRAPHIC CHARACTERISTICS

The estimates show considerable variation across selected demographic groups.

- Regardless of the participation measure used (individual, household, or benefit), preschool children and school-aged children participated at higher than average rates. For example, the individual rates were 75 percent for preschoolers and 73 percent for school children. The benefit rate for households with school children was 82 percent, compared to an overall benefit rate of 75 percent.

- Among the elderly, however, only 37 percent of eligible individuals participated, although the rate was higher among those living alone (41 percent), and was higher still among those receiving Supplemental Security Income (SSI) (67 percent).

- Among the disabled, close to 50 percent of the eligible individuals and eligible households participated, receiving 66 percent of the benefits payable if participation had been **100** percent.

- Among households headed by a single woman with children, approximately 75 percent participated.

- Households headed by black, nonhispanic individuals participated at a much higher rate (77 percent) than households headed by white, nonhispanic individuals (49 percent) or **hispanic** individuals (55 percent).

ESTIMATES OF PARTICIPATION BY SELECTED ECONOMIC CHARACTERISTICS

The estimates for eligible individuals and households with different economic characteristics show strong variation as well.

- Participation generally varied inversely with income. Individuals and households in poverty participated at considerably higher rates (79 percent and 75 percent, respectively) than individuals and households overall.

- Participation was greater among those eligible for larger benefits; the household rates ranged from 27 percent for monthly benefits under $10 to 87 percent for monthly benefits in excess of $150.

- Households with earnings had a lower-than-average participation rate (37 percent), whereas households receiving SSI, unemployment compensation, or public assistance participated at higher-than-average rates (66, 76 and **116**[1] percent, respectively).

CHARACTERISTICS OF ELIGIBLE NONPARTICIPANTS

Approximately 4.8 million out of the 11.7 million households eligible for food stamps did not participate in the program. More than half of the eligiile nonparticipants had incomes above the poverty line; one-third were eligible for a monthly benefit of $10 or less. The nonparticipants were equally divided among four groups: households with elderly persons, both above and below the poverty line, and households with workers, both above and below the poverty line. Elderly nonparticipating households tended to consist of a single individual while nonelderly nonparticipating households tended to consist of the working poor with children. About half of the households above poverty were eligible for small benefits ($10 or less) and, hence, their lack of participation is not surprising. However, households in poverty who did not participate tended to be eligible for large benefits (over half were eligible for $75 or more per month).

'A percentage **gre**ater than 100% is obtained due to measurement and sampling errors in the data.

I. INTRODUCTION

The Food Stamp Program (FSP) provides low-income households with assistance in buying the food they need to maintain a nutritious diet. A food stamp household is generally defined as a person living alone, or a group of persons living together and sharing food purchases and meal preparation, whose monthly income and assets fall below specified limits. The assistance is in the form of coupons that can be redeemed for food purchases. The amount of the coupons is based on household size and income.

Not all households eligible for food stamps actually participate in the program. The literature on the program suggests a variety of reasons for nonparticipation.' Some people may be unaware of the program, while others may presume they are not eligible for benefits. Other people may be aware of the program and their own eligibility for it, but view the benefits as not worth the effort required to obtain and use them. Still others may not participate because of the stigma they associate with the use of food stamps.

Obviously, since some eligible households do not apply for benefits, the FSP is not serving the entire population targeted by the legislation that established the program. Indeed, according to prevailing conceptual models of the decision to participate in the program, participation should not be expected to be universal (see **Allin** and **Beebout,** 1989). But even if participation will never be universal, the Congress and other policymakers are interested in the proportion and characteristics of the eligible population that actually does participate in the program. They are also interested in which subgroups of the target population are more likely than others to participate in the program.

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[1] See **Allin** and **Beebout** (1989) for a review of the literature.

This paper is the sixth in a series examining current issues on FSP participation, and the second which provides estimates of rates of participation in the FSP both among the total eligible population and among selected subgroups of that population that are of particular interest to policymakers.[2] Previous estimates of FSP participation have varied widely, because of differences in methodologies, differences in data sources, and inadequacies in the data sources.' The estimates reported in this series are more comprehensive and more accurate than most previous estimates. For this reason, and because these estimates are generally higher than most of the participation rates reported in previous research, this report should be of interest to policymakers who want to know how many and which program eligibles participate in the FSP.

Because substantial methodological improvements were made to the procedures used to estimate participation rates between the study of August 1984 participation rates (Doyle and Beebout, 1988) and the current study of August 1985 rates, the results of these papers are not directly comparable. These improvements are summarized in the Appendix.

The estimates in this series of reports are more accurate than most previous ones primarily because they are based on the Survey of Income and Program Participation (SIPP). Because eligibility for the FSP cannot be observed directly, the denominator of the participation rate (the total number of program eligibles or total potential benefits) has to be approximated using household survey data. In comparison to the household surveys used in previous research, such as the Current Population Survey (CPS), SIPP contains more, and more detailed, information on the household characteristics FSP administrators must consider

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[2]The first report in the series which provides estimates of participation rates is Doyle and Beebout (1988).

[3]For a review of the literature on FSP participation rates and estimation techniques, see Trippe (1988).

when making actual eligibility **determinations.**[4] For example, SIPP contains information on monthly (as opposed to annual) income, monthly household composition, most of the expenses used in calculating deductions from income, and vehicular assets, thereby significantly advancing our ability to approximate eligibility status using survey data.

Data for the numerators of the overall participation rates calculated here were derived from the Food Stamp Program Statistical Summary of Operations (hereafter referred to as Program Operations data) and were adjusted to account for benefits issued in error in August 1985.[5] These administrative data are more accurate than the self-reported survey data employed in some previous studies of FSP participation since recent research has indicated that food stamp recipiency tends to be substantially underreported in household survey data (U.S. Department of Commerce, 1987). Because the numerators of the ratios reported here are based on administrative counts, they are more reliable estimates of the number of actual participants and the amount of benefits paid. The Program Operations data do not, however, contain data on subgroups of the participating population. Estimates for these groups were calculated using a sample of food stamp case records from the Integrated Quality Control System (IQCS) of the U.S. Department of **Agriculture.**[6]

Although our estimates represent an improvement over previous results, they are not without their own sampling and measurement limitations. In particular, the underreporting of public assistance income and recipiency common to all household surveys causes unrealistic

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[4]**The** exception to this comparison is the 1979 Income Survey Development Program Research Test Panel (ISDP), the precursor to SIPP.

[5]**The** Food Stamp Program Statistical Summary of Operations is a monthly record of benefits issued and caseload serviced under the Food Stamp Program.

[6]**The** IQCS is a system of ongoing case record reviews designed to measure payment error rates in the Food Stamp, Aid to Families with Dependent Children (AFDC), and Medicaid programs. The IQCS is based on monthly probability samples drawn from all 50 states and the District of Columbia; this study uses active cases in the July/August 1985 samples.

estimates of food stamp participation rates among public assistance households. Furthermore, the survey does not provide all of the information needed to perfectly determine the food stamp-eligible unit in all households. In short, although **this** analysis represents a considerable improvement over most previous efforts, perfect statistics on the FSP-eligible population, or of subgroups participating in the program, are unattainable. Further research can reduce, but not eliminate, the uncertainties in estimation.

The remainder of this report is organized as follows. An overview of the methodology used is presented in Chapter II, while Chapter III reports the results for the overall participation rates, the rates disaggregated by selected demographic and economic characteristics, and the characteristics of those eligibles who did not participate. The report concludes with a technical appendix describing our procedures for estimating food stamp participation rates and differences in methodology between tbis report and the first report of this series on program participation (Doyle and **Beebout,** 1988); estimates of sampling error in the participation rate estimates; and the impact of asset measures on estimates of eligibles and participation rates.

II. METHODOLOGY AND DATA

This section describes the methodology employed in constructing the FSP participation rates presented in this report. Three rates of participation used in the literature are introduced and defined, followed by a discussion of how these rates are computed. The latter discussion includes a description of the criteria that FSP administrators use in making actual eligibility and benefit determinations and an explanation of how a model of those criteria was used to estimate the number of eligibles with SIPP data.

A.   THREE ALTERNATIVE MEASURES OF FSP PARTICIPATION

No single measure of participation can adequately answer all the questions policymakers have about participation in the FSP. The three alternative measures discussed in the literature--the individual rate, the household rate, and the benefit rate--differ not only in their magnitude, but also in their advantages and limitations in answering a given question. It is therefore important to define each measure, specify its potential usefulness, and explain how it has been used in previous studies.

1.   The Individual **Participation** Rate

The individual participation rate is a ratio of the number of persons participating in the FSP to the number of persons eligible for the program. Policy discussions about FSP participation rates have tended to focus on research results based on the individual rate, whereas discussions about participation behavior usually focus on a model of the household as the decision-making unit. In some instances, the individual rate may be preferable to the household rate, especially in answering questions about the participation of a particular subgroup of the target population. For example, the proportion of eligible elderly individuals

who participate in the **FSP** is a better indication of the behavior patterns of the elderly than is the proportion of all eligible households with an elderly member that participate.

2.   The Household Participation Rate

The household participation rate is the ratio of the number of food stamp unit., or households, participating in the program to the number of households eligible for the program. As just noted, analyses of participation behavior tend to rely on this rate because the household is seen as the decision-making unit. The definition of the household as the decision-making unit is derived in part from program rules that determine eligiiility and benefits for households, not for individuals. The household rate can differ significantly from the individual rate because larger households are more likely to participate in the FSP than one-person households.

3.   The Benefit Rate

The benefit rate is the ratio of the actual benefits paid to program participants to the total potential benefits payable if all program eligibles participated. Although it has not been used extensively in previous research, the benefit rate may be the best overall measure of how well the **FSP** is meeting the target population's need for assistance. The benefit rate estimates reported here are generally higher than the individual and household rate estimates, indicating that households with higher benefit levels, and, thus, greater need, are more likely to participate than households with lower benefit levels.

B.   ESTIMATION OF PARTICIPATION BATES

Estimates of the numerators in the participation rate ratios reported here are based on administrative data derived from three sources as described in the Appendix. The first source is the Program Operations data providing the number of persons and households issued

benefits in August 1985 and the total dollar value of the coupons issued. These data were adjusted to eliminate ineligible participants and erroneous benefits as determined from the IQCS. Finally, the adjusted total number of participating households and persons and their **benefits** were distributed across various demographic and economic characteristics based on information from a sample of case records active in July and August 1985.[7]

Estimates of the denominators of the participation rate ratios were developed from SIPP using the procedures outlined in the Appendix In essence, a model of the food stamp eligibility criteria formed the basis for determining which SIPP respondents belonged in the sample of program eligibles. This model used a simulation procedure whereby we quantified the program rules discussed below and applied them to each dwelling unit in the SIPP sample in August 1985. For units determined to be eligible as a result of this simulation, we estimated composition and potential benefits. Below we summarize the criteria program administrators employ in making'actual determinations of eligibility and benefits.

Eligibility for the FSP is based on a series of rules defining the applicant's need, which is deemed a function of available cash income conditional on unit (household) size, as well as assets accessible to the **unit**.[8] The determination of need for each household applying for FSP benefits can be **disaggregated** into four distinct parts: (1) income limits, (2) asset limits, (3) nonfinancial standards, and (4) benefit levels. The parameters of each of these parts vary over time with cost-of-living adjustments and legislated changes in the program. This analysis

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'This sample of cases was developed in the preparation of an annual report on the characteristics of food stamp households (U.S. Department of Agriculture, 1987).

[8]**The** discussion that follows is an overview of the regulations governing **FSP** eligibility and benefits. The complete regulations appear in the Code of Federal **Regulations** (7 CFR parts **270-273**). A more in-depth summary of those regulations appears in Doyle and **Beebout** (1988).

employs the FSP criteria in existence in August 1985, the month corresponding to the administrative and SIPP data used.

The income test is comprised of two parts: a net and a gross income screen. Under the net income screen, monthly gross income net of allowable expenses must fall below the monthly federal poverty guidelines which vary by household size and geographic location.[9] Under the gross income screen, food stamp units that do not contain elderly or disabled members must also have gross incomes below 130 percent of the same poverty guidelines. In August 1985, gross income, as measured by the program, included all cash income received by members of the food stamp household, excluding the earnings of students under age 18, loans, nonrecurring lump-sum payments, and reimbursement of certain expenses. Net income was defined as gross income less a standard deduction, an earnings deduction, and deductions for expenses incurred for child care, medical, and shelter costs.[10]

There are also two different asset limits. In 1985, a food stamp household could have countable assets (or resources, as they are called in the administration of the program) of $1,500 or less and remain eligible for benefits. If an elderly person was present, and the household contained at least two members, the asset limit was $3,000. Selected pieces of property, such as the principal home, adjacent land, most household goods, and vehicles needed to produce income or to transport disabled individuals are not considered countable resources, but all other financial and nonfinancial assets are generally included. In most instances, assets are counted at their fair market value as long as they are accessible to at

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[9] The income limits are based on the official monthly poverty guidelines, published by the U.S. Department of Health and Human Services (DHHS), which are adjusted each year to account for inflation. The income guidelines and other FSP parameters are generally the same for the 48 contiguous states and the District of Columbia and vary slightly for Alaska and Hawaii and the territories.

[10] The medical deduction is only allowed for medical expenses incurred by elderly or disabled members of the household.

least one member of the food stamp household. The principal exception to this is the treatment of vehicular **assets.**[11]

Nonfinancial eligibility standards include the definition of the program unit and characteristics of the unit (such as the presence of an elderly member) which affect eligibility. In general, food stamp benefits are issued to "households," but there are aspects of the program unit definition that distinguish the term from the Census designation, namely, a group of individuals who share living quarters.[12] The food stamp household consists of a person who lives alone, or persons who live together and share food purchases and meal preparation, with some exceptions for households containing elderly individuals unable to prepare their own meals. Restrictions are imposed on the formation of the food stamp household to prevent spouses, siblings, and parents with children under age 18 from forming separate units within a dwelling unit even if they purchase and prepare meals separately. Furthermore, selected individuals within a dwelling unit are excluded altogether from participation in the FSP. These include illegal aliens, persons refusing to comply with work registration requirements, strikers, and residents of most institutions. The FSP also contains several provisions designed to require able-bodied adults to work, seek training preparatory for work, or look for work. Individuals not exempt from these work registration requirements are prohibited from participating in the program if they refuse to comply.

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[11]**Vehicles** needed for work-related travel, and one additional vehicle owned by members of the food stamp household, are valued at the current Blue Book value, and only the amount in excess of $4,500 is considered available resources. Any remaining vehicles owned by members of the household are subject to both a market value test and an equity test. The maximum of market value, less $4,500, and the equity is counted towards the household's assets.

[12]**Groups** of individuals who share living quarters are referred to as dwelling units or Census **households. The latter term is significant in this analysis because the dwelling unit is commonly the** interview unit used by the Census Bureau in collecting survey data on the U.S. population. Specifically, as noted in the Introduction, the dwelling unit is the interview unit for SIPP.

Households deemed eligible based on the criteria described above have their benefits computed as the difference between the maximum food stamp benefit for their household size and geographic location and 30 percent of their net monthly income.[13] In August 1985, the maximum food stamp benefit in the continental United States was $264 for a family of four. Households of size 1 or 2 whose benefit computation results in coupon values of less than $10 are issued a minimum benefit of $10.

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[13]The maximum food stamp benefit in 1985 was equal to the Thrifty Food Plan for a family of 4 adjusted for the size of the unit using economies of scale specified through legislation.

III. RESULTS

Almost 7 million households in the 50

SIPPared from

As outlined in section

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FSPseholds who did not participate in the

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TABLE 1

**Individual, Household, and Benefit
Participation Rates,
August 1985**

	Participants	Eligibles	Participation Rate
Individuals (1,000)	18,560	28,884	64.3%
Households (1,000)	6,894	11,604	59.4
Benefits (1,000)	$807,265	$1,072,262	75.3
Average Household Size	2.7	2.5	
Average Per Capita Benefit	$43.5	$37.1	

Sources: Counts for participants are from the Food Stamp Program Statistical Summary of Operations adjusted for errors in issuances of ibenefits. Estimates for eligibles were derived from special tables prepared using the August 1985 analysis file developed from SIPP, 1984 and 1985 panels. The SIPP analysis file contains 27,660 households in total and 3,559 households eligible for food stamps.

A.   PARTICIPATION RATES BY SELECTED DEMOGRAPHIC CHARACTERISTICS

Table 2 presents household participation rates disaggregated by the size of the eligible unit. Most eligible households are relatively small, as are most participating households. Yet the participation rate tended to be higher for larger households, with single-person households participating at a substantially lower rate (50 percent) than all eligible households.

Individual participation rates disaggregated by selected demographic characteristics are presented in Table 3.   The table shows that the FSP was serving a large majority of children in eligible households in August 1985. Three-fourths of eligible preschool children, that is, children under age 5, resided in households that participated in the program. Among school-age children this rate was 73 percent.

The participation rates for elderly and disabled individuals (37 and 47 percent respectively) were much lower than the overall rate for individuals and the rate for adults ages 18 to 59 (64 and 65 percent, respectively). However, the rates varied depending on the individual's living arrangements. Elderly individuals living alone were more likely to participate than elderly individuals living with others (41 percent versus 30 percent respectively). Similarly, 52 percent of eligible disabled individuals living alone received benefits under the program, whereas only 45 percent of those living with others participated. Given that participation rates are higher than average for households of size 2 or more, this pattern for elderly and disabled individuals is surprising, and suggests that household size may be less of a determining factor in their decisions to participate.

Table 4 presents household participation rates by selected characteristics. These rates also show that those who are elderly or disabled were less likely to be participating in the program.   Only 37 percent of the eligible households containing an elderly member participated. Households with a disabled member, which are afforded most of the more

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TABLE 2

**Household Participation Rates
by Household Size,
August 1985**

Household Size (number of persons)	Number of Participating Households (1,000)	Number of Eligible Households (1,000)	Household Participation Rate
1	2,313	4,649	49.8%
2	1,471	2,380	61.8
3	1,208	1,718	70.3
4	900	1,369	65.8
5	502	817	61.5
6+	499	671	74.3

Sources: Counts for participants are from the Food Stamp Program Statistical Summary of Operations adjusted for errors in issuances of benefits. Estimates for eligibles were derived from special tables prepared using the August 1985 analysis file developed from SIPP, 1984 and 1985 panels.   The SIPP analysis file contains 27,660 households in total and 3,559 households eligible for food stamps.

TABLE 3

Individual Participation Rates
by Selected Demographic Ch-aracteristics,
August 1985

	Number of Participating Individuals (1,000)	Number of Eligible Individuals (1,000)	Individual Participation Rate
Living Alone			
Elderly	1,068	2,588	41.3%
Disabled	194	370	52.4
Living with Others			
Elderly	592	1,949	30.4
Disabled	307	686	44.8
Total Elderly	1,660	4,537	36.6
Total Disabled	501	1,056	47.4
Children under Age 18	9,181	12,490	73.5
Preschool	2,944	3,912	75.3
School-Age	6,238	8,579	72.7
Adults Ages 18 to 59	7,702	11,857	65.0

Sources: Counts for participants are from the Food Stamp Program Statistical Summary of Operations adjusted for errors in issuances of benefits. Estimates for eligibles were derived from special tables prepared using the August 1985 analysis file developed from SIPP, 1984 and 1985 panels. The SIPP analysis file contains 27,660 households in total and 3,559 households eligible for food stamps.

TABLE 4

**Household Participation Rates
by Selected Demographic Characteristics,
August 1985**

Household Contained:	Number of Participating Households (1,000)	Number of Eligible Households (1,000)	Household Participation Rate
Elderly	1,475	3,957	37.3%
Disabled	476	1,019	46.7
Children under Age 18	4,079	5,517	73.9
Children Ages 5 to 17	3,193	4,275	74.7
Single Female Adult with Children	2,400	3,207	74.8
Single Male Adult with Children	96	209	45.9
Two or More Adults with Children[a]	1,583	2,101	75.3
White Nonhispanic Head	3,302	6,754	48.9
Black Nonhispanic Head	2,502	3,246	77.1
Hispanic Head	712	1,298	54.8

Sources: Counts for participants are from the Food Stamp Program Statistical Summary of Operations adjusted for errors in issuances of benefits. Estimates for eligibles were derived from special tables prepared using the August 1985 analysis file developed from SIPP, 1984 and 1985 panels.   The SIPP analysis file contains 27,660 households in total and 3,559 households eligible for food stamps.

[a]Includes households in which the gender of the household head is unknown and female-headed households containing two or more adults.

generous eligibility standards given to households with an elderly member, participated at a somewhat higher rate (47 percent).

Among households with children, the participation rate was 74 percent, which is much higher than the overall household rate. The participation rate among single male-headed food stamp households with children (46 percent) was considerably less than the participation rate among single female-headed and two-parent households with children (75 percent). Note, however, the former rate is based on a relatively small sample. These rates differ drastically from the rates reported in Doyle and Beebout (1988). Those rates exceeded 100 percent for female-headed households with children. The difference reflects a change in the method of classifying eligible households along this dimension. Doyle and Beebout classified the food stamp-eligible household as female-headed with children if the Census dwelling unit in which the eligible food stamp household resided was a female-headed household with children. The rates in Table 4 reflect the classification of food stamp-eligible groups based on the presence of children in the eligible unit and the marital status of the designated head of the eligible unit.[14] Because of this difference, the 1985 results are more reasonable than the 1984 results, and, hence, there is some indication that the apparent shortage of low-income single parent households in SIPP and other household surveys (reported by Doyle and Trippe (1989) and Doyle and Beebout (1988)) may be attributed to a large extent to the inability to accurately measure the composition of program units within Census dwelling units with household survey data.

Food stamp participation rates varied considerably by race and ethnicity. More than three-fourths of the eligible households headed by a black, nonhispanic individual participated

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[14]The designated head was chosen in a somewhat arbitrary fashion. In households that reported receiving food stamps, it is the person who reported the food stamp benefit first in the household. In other food stamp-eligible units, it is the first adult encountered.

in the FSP while only half of the eligible households headed by a white, nonhispanic individual participated in August 1985. Hispanic households participated at a rate of 55 percent.

In general, the benefit rates were higher than the corresponding individual and household rates. Table 5 presents the benefit rates disaggregated by selected demographic household characteristics. The benefit rate for households with an elderly member was 43 percent--6 percentage points higher than the corresponding individual rate. The pattern was more extreme for disabled individuals; the **FSP** was serving just over 45 percent of the eligible disabled individuals and households, while about 66 percent of the potential benefits for this group were being provided. This pattern implies that, within each of these groups, the needier households participated at a higher rate than less needy households.

Eighty-two percent of the benefits for which they were eligible were paid out to the households with children under age 18 that were eligible for assistance. Unlike the 1984 benefit rates which were highest for female-headed households, the 1985 rates were highest for two-parent households with children (94 percent) and lowest for single male-headed households with children (47 percent). Female-headed food stamp households received 76 percent of the benefits which would have been issued had participation among this group been 100 percent. The change in the participation patterns between 1984 and 1985 is an artifact of the change in procedures used to classify food stamp-eligible households along this dimension, as reported earlier.

Benefit levels seem to have more influence on the participation decision of two-parent households with children than single-parent households with children. About 94 percent of the benefits which could be issued to two-parent households with children were paid out in **August** 1985, whereas only 75 percent of the eligible households of this type participated. On

TABLE 5

Benefit Rates
by Selected Demographic Characteristics of the Household,
August 1985

Household Contained:	Benefits Paid to Participating Households (1,000,000)	Potential Benefits for Eligible Households (1,000,000)	Benefit Rate
Elderly	$ 70.3	$164.8	42.7%
Disabled	42.1	64.1	65.7
Children under Age 18	651.0	791.3	82.3
Children Ages 5 to 17	537.8	637.6	84.3
Single Female Adult with Children	341.2	448.5	76.1
Single Male Adult with Children	11.9	25.2	47.4
Two or More Adults with Children[a]	297.8	317.7	93.7
White Nonhispanic Head	360.8	524.9	68.7
Black Nonhispanic Head	310.5	358.4	86.6
Hispanic Head	94.1	154.3	61.0

Sources: Counts for participants are from the Food Stamp Program Statistical Summary of Operations adjusted for errors in issuances of benefits. Estimates for eligibles were derived from special tables prepared using the August 1985 analysis file developed from SIPP, 1984 and 1985 panels.   The SIPP analysis file contains 27,660 households in total and 3,559 households eligible for food stamps.

[a]Includes households in which the gender of the household head is unknown and female-headed households containing two or more adults.

the other hand, benefit rates were almost identical to household rates for single female-headed and male-headed households.

Benefit rates do not vary by race and **ethnicity** in the same manner as household rates. While the highest benefit rate was among black nonhispanic households (87 percent), the rate among white nonhispanic households (69 percent) exceeded the rate among **hispanic** households (61 percent). Thus, it appears that the level of benefits has a greater impact on the participation decision of white nonhispanic households than households of other race and ethnic origins.

B. PARTICIPATION RATES BY SELECTED ECONOMIC CHARACTERISTICS

Household participation rates disaggregated by levels of potential benefits are presented in Table 6. The estimates suggest that the decision to participate in the **FSP** is influenced by the level of benefits for which a household is eligible. In August 1985, the lowest participation rate (27 percent) was among households eligible for benefits no larger than the minimum benefit of $10. In general, the participation rate increased as the potential benefit rose, reaching a maximum of 88 percent for households whose potential benefit fell between $151 and $200. One exception to this pattern was a very slight, and probably insignificant, drop (from 88 to 87 percent) between the rates for households in the two highest benefit categories.

More than three-fourths (79 percent) of the individuals in poor households (i.e., their incomes fell below the poverty level) that were eligible for food stamps participated in the program (Table 7). Similarly, 75 percent of households in poverty participated, receiving 81 percent of the benefits which would have been issued had all poor households participated (Tables 8 and 9). All three rates were at least 90 percent for households with incomes below half the poverty level, and declined rapidly as income increased. The participation rates were

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TABLE 6

**Household Participation Rates
by the Level of Monthly Benefits,
August 1985**

Monthly Benefit Level	Number of Participating Households (1,000)	Number of Eligible Households (1,000)	Household Participation Rate
≤ $10	600	2,201	27.3%
11-25	350	799	43.9
26-50	625	1,386	45.1
51-75	749	1,236	60.6
76-100	1,323	1,958	67.6
101-150	1,302	1,791	72.7
151-200	789	900	87.7
201+	1,155	1,334	86.6

Sources: **Counts for participants are from the Food Stamp Program Statistical Summary of Operations adjusted for errors in issuances of benefits. Estimates for eligibles were derived from special tables prepared using the August 1985 analysis file developed from SIPP, 1984 and 1985 panels. The SIPP analysis file contains 27,660 households in total and 3,559 households eligible for food stamps.**

TABLE 7

Individual Participation Rates
by the Ratio of Gross Income of the
Individual's Food Stamp Unit to the Monthly Federal Poverty Level,
August 1985

Income as a Percentage of Poverty	Number of Participating Individuals (1,000)	Number of Eligible Individuals (1,000)	Individual Participation Rate
Total ≤ 100	17,365	22,067	78.7%
0	961	1,379	69.7
1-50	6,997	7,608	92.0
51-100	9,407	13,080	71.9
Total > 100	1,195	6,816	17.5
101-130	1,145	6,411	17.9
≥ 131	50	405	12.3

Sources: Counts for participants are from the Food Stamp Program Statistical Summary of Operations adjusted for errors in issuances of benefits. Estimates for eligibles were derived from special tables prepared using the August 1985 analysis file developed from SIPP, 1984 and 1985 panels. The SIPP analysis file contains 27,660 households in total and 3,559 households eligible for food stamps.

TABLE 8

**Household Participation Rates
by the Ratio of Gross Income of the
Food Stamp Unit to the Monthly Federal Poverty Level,
August 1985**

Income as a Percentage of Poverty	Number of Participating Households (1,000)	Number of Eligible Households (1,000)	Household Participation Rate
Total ≤ 100	6,457	8,655	74.6%
0	472	684	69.0
l-50	2,295	2,477	92.7
51-100	3,690	5,495	67.2
Total > 100	437	2,948	14.8
101-130	408	2,681	15.2
≥ 131	29	267	

Sources: Counts for participants are from the Food Stamp Program Statistical

1 9 8 5

TABLE 9

Benefit Rates
by the Ratio of Gross Income of the
Food Stamp Unit to the Monthly Federal Poverty Level,
August 1985

Income as a Percentage of Poverty	Benefits Paid to Participating Households (1,000,000)	Potential Benefits for Eligible Households (1,000,000)	Benefit Rate
Total ≤ 100	$792.5	$978.5	81.0%
0			
≤otal 0 0	15.3	93.7	16.3
101-130	15.0	88.5	16.9
≥ 131	0.3	5.2	6.4

Sources: Counts for participants are from the Food Stamp Program Statistical Summary of Operations adjusted for errors in issuances of benefits. Estimates for eligibles were derived from special tables prepared using the August 1985 analysis file developed from SIPP, 1984 and 1985 panels. The SIPP analysis file contains 27,660 households in total and 3,559 households eligible for food stamps.

under 20 percent for all higher-income classes, reaching a low of 6 percent for benefits to households with incomes above 130 percent of poverty. Households and persons in this higher-income class were eligible for only small amounts of assistance; thus, their low participation is not surprising.

The estimates of the three participation rates for units with incomes above 130 percent of poverty showed an unexpected pattern. The individual participation rate for that income class was **12** percent; the corresponding household rate was 11 **percent;** and the corresponding benefit rate was 6 percent. Food stamp eligibility criteria restrict this group to households containing an elderly or disabled individual (these households are the only ones exempt from the gross income test). These differences in the rates imply that participating households in this income class received lower benefits than the potential benefits of nonparticipating eligible households in the same class. This implication is contrary to the notion that participation rates increase as potential benefits increase. On the other hand, the sample size for this group is somewhat small, implying that the estimates have low statistical reliability.

Individuals in eligible households with no cash income had a participation rate of 78 percent. Similarly, households with no income participated at a rate of 69 percent, while the benefit rate for this group was 70 percent. Because no household can exist on zero income, and studies based on other surveys have shown measurement problems to be prevalent in the zero-income group, the eligible units with zero income presumably include households for which some form of reporting or measurement error has **occurred.**[15]

Estimation of participation patterns by the receipt of selected sources of income concludes the analysis of participation rates in the FSP. Household participation rates among those with earnings, SSI, public assistance, and unemployment compensation are presented in

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[15]**As** discussed in Doyle and **Beebout (1988),** selected studies have shown that households classified as zero income often represent measurement or classification problems rather than households with no source of economic support, and that is why they do not seem to behave in the expected manner.

Table 10. The estimated participation rate for households with earnings was much lower than the overall rate (37 percent versus 59 percent). Recipients of unemployment compensation, on the other hand, participated at a higher rate (76 percent) than that of the total eligible population. The rate for earners remained relatively constant between August 1984 and August 1985, while the rate for those receiving unemployment compensation rose. However, the sample size for eligible households with unemployment compensation was small, and, therefore, these estimates, and the difference in these estimates, are of low statistical reliability.

The household participation rate for food stamp households that received SSI payments--66 percent--exceeded the overall participation rate by about 11 percent. Households in both the numerator and the denominator of this participation rate exclude persons receiving SSI in cashout states, where cash is issued through the SSI program in lieu of food stamps.

Households that contained an elderly member and that also received SSI participated at a much higher rate--67 percent--than did all households that contained an elderly member (37 percent, from Table 4). The rate of SSI participation by elderly individuals eligible for that program has been estimated to be 52 to 61 percent (Shiels, Barnow, Chaurette and Constantine, 1990), which is considerably higher than the corresponding rate for elderly individuals eligible for food stamps (37 percent, from Table 3). Given the higher FSP participation rate for elderly participants who received SSI than the elderly in general, it is likely that the low overall rate of food stamp participation among the elderly was due to the low participation rate of those who were not poor enough to qualify for SSI. Such individuals are entitled to small food stamp benefits as well.

The estimates for households receiving public assistance, and especially those receiving AFDC, exceeded 100 percent. These unrealistic rates are primarily due to the underreporting

TABLE 10

**Household Participation Rates
by Selected Sources of Income,
August 1985**

Source of Income	Number of Participating Households (1,000)	Number of Eligible Households (1,000)	Household Participation Rate
Earned Income	**1,352**	**3,674**	**36.8%**
SSI	1,303	1,983	65.7
Elderly in the unit	863	1,296	66.6
No Elderly in the unit	**440**	**687**	**64.1**
Public Assistance	3,381	2,927	115.5
AFDC	2,664	2,249	118.5
Other welfare	**761**	**781**	**97.4**
Unemployment Compensation	**183**	**242**	**75.6**

Sources: Counts for participants are from the Food Stamp Program Statistical Summary of Operations adjusted for errors in issuances of benefits. Estimates for eligibles were derived from special tables prepared using the August 1985 analysis file developed from SIPP, 1984 and 1985 panels.   The SIPP analysis file contains 27,660 households in total and 3,559 households eligible for food stamps.

of AFDC receipt in SIPP (the number of **receipients** of AFDC benefits in SIPP was only 82 percent of an independent estimate derived from administrative data) discussed in the Appendix.

C. CHARACTERISTICS OF ELIGIBLE NONPARTICIPANTS

The preceding sections focused on those households that participate in the Food Stamp Program. In this section, the focus is on those households that were eligible for the FSP but did not participate.

About 4.7 million of the 11.6 million households eligible for the FSP did not participate in August 1985 (see Table 11). These households tended to have relatively high incomes and were entitled to relatively small benefits. Among all eligible nonparticipants,

- more than half had incomes above the poverty level, and

- a third were eligible for a monthly benefit of $10 or less; more than 40 percent were eligible for a monthly benefit of $25 or less.

As shown earlier in this report and in other research (Doyle and **Beebout,** 1988 and **Allin** and **Beebout, 1989),** those who are eligible for lower benefits tend to participate in the **FSP** at lower-than-average rates, so these results are not surprising. These characteristics of nonparticipating eligibles also serve as further evidence that the program is well-targeted to those with comparatively greater need.

On the other hand, about half of nonparticipating eligibles had incomes below the poverty line, and half of those were eligible to receive over $75 a month in food stamps.

TABLE 11

Characteristics of Eligible Nonparticipants
Above and Below Poverty
August 1985

	Percent Distribution of Eligible Nonparticipating Households[a]		
	Below Poverty	**Above Poverty**	**Total**
Benefit Level			
<=$10	9.9	24.1	34.0
11-25	3.2	6.3	9.5
26-75	8.8	17.8	26.5
76+	24.8	5.2	30.0
TOTAL	**46.7**	**53.3**	**100.0**
Composition			
Elderly Present	26.5	26.2	52.7
Living alone	14.8	17.6	32.3
Living with others	11.7	8.5	20.3
Nonelderly Households			
With Earnings	21.2	22.8	44.0
With children	14.2	17.0	31.2
Without children	7.0	5.8	12.8
Total	**46.7**	**53.3**	**100.00**
Population counts			
Persons (thousands)	4,702	5,621	10,323
Households (thousands)	2,198	2,511	4,711
Benefits (millions)	$186.5	$78.4	$264.9

SOURCE: Eligible nonparticipants are computed as the difference between eligibles and participants. Counts for participants are from the Food Stamp Program Statistical Summary of Operations adjusted for errors in issuances of benefits. Estimates for eligibles were derived from special tables prepared using the August 1985 analysis file developed from SIPP, 1984 and 1985 panels. The SIPP analysis file contains 27,660 households in total and 3,559 households eligible for food stamps.

[a]Percents may not sum to 100 due to rounding error.

Overall, about 30 percent of all nonparticipants were eligible for monthly benefits greater than $75. The reasons for this group's nonparticipation are less clear.[16]

Eligible nonparticipants were relatively evenly split between households containing elderly persons and those with earnings, and households above and below the poverty line. Table 12 illustrates that they were heavily concentrated in two poverty classes: 51 to 100 percent of poverty (38 percent) and 100 to 130 percent of poverty (48 percent). Most nonparticipating households had either an elderly member--two-thirds of whom lived alone--or a working member--most of whom had children. These characteristics are consistent with earlier findings on participation rates that show below-average participation among the elderly and the working poor.

Overall, half the eligible nonparticipating households consisted of a single adult, just under one-third contained children, and three-fourths were headed by a white nonhispanic individual. Most eligible nonparticipating households with children (17 out of 31 percent) were headed by a single female, although a sizable portion (11 out of 31 percent) consisted of two-parent households. Only 5 percent of the eligible nonparticipating households were reported to have no income, and hence may have been subject to some form of measurement error, as noted in Section B. Very few received unemployment compensation (relatively few eligible households have this inwme source), while 14 percent received SSI.

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[16]As noted earlier, it is likely that households with zero inwme (entitled to benefits in excess of $75) are overrepresented because eligible units with zero income presumably include households for which some form of measurement error has occurred. Eligible nonparticipant households with zero income comprise 5 percent of the total eligible nonparticipant group (from Table 12) and about 16 percent of eligible nonparticipant households with benefits in excess of $75 per month.

TABLE 12

Demographic and Economic Characteristics
of Eligible Nonparticipant Households
August 1985

	Ponulation Counts	Distribution of Households
Household size[a]		
1	2,336	49.6%
2	909	19.3
3	510	10.8
4	469	10.0
5	315	6.7
6+	172	3.7
Households containing:[b]		
Elderly	2,482	52.7
Elderly living alone	1,520	32.3
Disabled	543	11.5
Disabled living alone	176	3.7
Children under age 18	1,438	30.5
Children under age 5	633	13.4
Children ages 5 to 17	1,082	23.0
Single-female with children	807	17.1
Single male with children	113	2.4
Two or more adults with children	518	11.0
White nonhispanic head	3,452	73.2
Black nonhispanic head	744	15.8
Hispanic head	586	12.4
Income as percent of poverty[a]		
0	212	4.5
1-50	182	3.9
51-100	1,805	38.3
101-130	2,273	48.3
131+	238	5.1
Household income includes:[b]		
Earnings	2,322	49.3
SSI	680	14.4
Unemployment compensation	59	1.3
Total Households	4,711	100.0

SOURCE: Eligible nonparticipants are computed as the difference between eligibles and
participants. Counts for participants are from the Food Stamp Program Statistical
Summary of Operations adjusted for errors in issuances of benefits. Estimates for
eligibles were derived from special tables prepared using the August 1985 analysis
file developed from SIPP, 1984 and 1985 panels. The SIPP analysis file contains
27,660 households in total and 3,559 households eligible for food stamps.

[a]Percents may not sum to totals due to rounding error.

[b]Percents do not sum to 100 because households may have more than one of the characteristics
listed.

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APPENDIX

TECHNICAL PROCEDURES USED TO COMPUTE PARTICIPATION RATES

As noted in the text, the participation rates developed for this study were derived from a comparison of administrative data on program participation to survey data on program eligibles. This appendix provides detailed information on how the numerators and the denominators were constructed.

A. USING ADMINISTRATIVE DATA TO ESTIMATE THE NUMBER OF PARTICIPANTS

One source of the disparities in the previous estimates of FSP participation rates, as noted earlier, has been the use of household survey respondents' reports of their own participation--data known to be substantially underreported. For example, the U.S. Department of Commerce (1989) estimated that only 76 percent of the households receiving food stamps in 1988 reported that receipt in the March 1989 CPS.

The estimates of the numerator in the rates reported here are based on administrative data derived from three sources. The first source is the Program Operations data which contain information on the number of persons and households issued benefits and the total dollar value of the coupons issued for August 1985. The Program Operations statistics are presented by state, allowing us to adjust the totals to estimate the caseload residing in the 50 states and the District of Columbia, the population reflected in SIPP.

The second data source is the Integrated Quality Control System (IQCS). This was used to adjust the Program Operations statistics to eliminate ineligible participants and erroneous benefits which cannot be captured in the estimation of eligibility using SIPP. The number of participating households in FY 1985 Program Operations data was adjusted downward by 3.67 percent to eliminate ineligible households that were not included in the SIPP-based denominators of the participation rates. Similarly, total benefits reported in the

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Program Operations data were reduced by the proportion of benefits issued in error to these ineligible households (6.02 percent).[17]

The third data source is a sample of food stamp case records from July and August 1985 IQCS samples. This sample of case records was used to calculate the distribution of persons, households, and benefits across various demographic and economic characteristics.

B. USING SIPP TO ESTIMATE THE NUMBER OF ELIGIBLES

Our estimation of the FSP-eligible population in August 1985 involved several stages. First, using SIPP data, we developed an analysis file reflecting the U.S. population as of August 1985. We then used this file to simulate program eligibility, a process whereby we quantified the program rules defined in the Chapter II and applied them to each dwelling unit in the data base. For each dwelling unit we also estimated its composition, eligibility status, and potential benefits. Section 1 summarizes our development of the analysis file, and section 2 assesses the outcome of the eligibility simulation.

1. Development of the Analysis File

SIPP is a nationally representative longitudinal survey of adults in the United States that provides detailed monthly information on income, program participation, and wealth. It is a multipanel longitudinal survey to which replacement panels are added each year. At the time of this study, only data from the first two (1984 and 1985) panels were available. Each panel contains information on persons in a longitudinal sample followed for a period of over two and one-half years. The longitudinal sample is composed of adults, ages 15 or older, residing in a cross-sectional sample of dwelling units in the United States. These adults, along

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[17]Total benefits could have been further adjusted to account for benefits issued incorrectly to eligible households (both over- and underpayments). However, this adjustment would have had no practical effect because the overpayment and underpayment rates virtually offset each other. Because the difference is trivial, and a strong conceptual basis for making the additional adjustment was lacking, we elected to adjust only for benefits paid to ineligible households.

with other individuals with whom they resided, were interviewed every four months. In each round of interviewing (or wave), a core questionnaire collected information on each of the four months preceding the interview date. In most waves, the monthly core questions were supplemented with questions on a variety of topical issues that varied from wave to wave. Because the interviewing process was staggered, the reference period covered in any given wave was not the same for all sample members.[18]

Although the survey is longitudinal, it is designed to support cross-sectional estimation for Census households residing in the 50 states and the District of Columbia. For this analysis, cross-sectional estimates of food stamp-eligible households were derived from Wave 7 of the 1984 panel and Wave 3 of the 1985 panel, each of which was combined with information collected in other selected waves of the respective panels. Although Wave 7 of the 1984 panel and Wave 3 of the 1985 panel were independent samples of the U.S. population, they were administered simultaneously. Furthermore, a straightforward adjustment to the sample weights allowed estimates to be based on combined panels.

These two waves were chosen for the following reasons: (1) they sampled the population in the month of August, making the reference period comparable to the administrative data used for the numerator; (2) they contain topical information on assets; and (3) together, they provide a relatively large sample size (27,660 households). The integration of data from the other waves within each panel was necessary because Waves 7 and 3 do not contain selected information needed to estimate food stamp eligibility. Although they do contain measures of monthly income, monthly Census household composition, and assets, they do not contain measures of medical, child care and shelter expenses, and the information

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[18]For further information on the design and scope of SIPP, see U.S. Department of Commerce (1987).

needed to determine disability status is incomplete. The omissions were corrected in the following way:

- Out-of-pocket medical expenses were imputed based on data from the Consumer Expenditure Survey.

- Child care expenses were linked to Wave 7 of the 1984 Panel from Wave 5 and to Wave 3 of the 1985 Panel from Wave 4 using procedures designed to compensate for changes in circumstances that might have occurred within each panel.

- Shelter expenses were linked to Wave 7 of the 1984 Panel from Wave 4 of that panel accounting for changes in circumstances over time. Due to their omission in the 1985 panel, shelter expenses were imputed to Wave 3 of the 1985 panel based on data from Wave 4 of the 1984 panel.

- Disability status was linked from Wave 1 of the respective panels.

Mathematica Policy Research, Inc. (1990) describes in more detail the development of the analysis file used in the simulation of the FSP.

2. <u>An Assessment of the **Eligibility** Simulation</u>

In brief, the procedure used to estimate the **eligible** population was designed to replicate, as closely as possible given the data limitations outlined below, the eligibility determination process for each individual or household on the SIPP analysis file. In other words, the program eligibility and benefit criteria outlined above were applied to each household as if it had actually applied for food stamps.

Although **SIPP** contains more information on the variables involved in determining **FSP** eligibility and benefits than does any other household survey available, problems still remain. The simulation procedures described above cannot perfectly replicate the eligibility and benefit determination process mandated in the legislation, despite the adjustments and enhancements made to the SIPP data. Specific discrepancies are summarized below.

- Unit definition: Because SIPP does not measure the complete set of characteristics used in determining a food stamp unit, especially information on which dwelling unit members customarily purchase and prepare food together, the simulated food stamp household is not the same as the unit determined by the food stamp case worker. For this study, the reported program unit composition in Census households **with** reported benefits was used to simulate the food stamp household. In other dwelling units with cash assistance, the food stamp household was equal to the cash assistance unit, plus any spouses or related children under age 18 in the dwelling. In all other dwelling units, the simulated food stamp household was the same as the Census household. Issues affecting the construction of food stamp households in SIPP are described in **Landa** (1987) and Doyle and **Dalrymple** (1987).

- Countable assets: The financial, nonfinancial, and vehicular assets reported in SIPP were used to estimate countable assets, according to program rules. SIPP does not explicitly measure, however, all of the information needed for this purpose, such as cash on hand. Furthermore, persons not present at the time of the interview are assumed to have no vehicular assets.

- Cross income: The measure of gross income employed for this study is close to, but not precisely the same as, gross income reported to the food stamp case worker. First, survey data on income and program participation, such as the data collected in **SIPP,** tend to be underreported. For example, the number of recipients of AFDC benefits in SIPP was only 82 percent of an independent estimate derived from administrative data; the number of recipients of unemployment compensation was 79 percent of the benchmark; and the number of recipients of veterans' benefits was 90 percent of the benchmark (U.S. Department of Commerce, 1985). Second, the definition of income for purposes of food stamp eligibility is not precisely the same as income measured in SIPP. For example, the Food Stamp Program counts net self-employment earnings averaged over a period of up to one year, whereas **SIPP** measures self-employment draw. Third, as noted above, unit composition, as simulated with **SIPP** data, differs from the case worker's determination of the food stamp household, and, hence, aggregated income for the food stamp household may differ as well.

- Net income: The use of approximated medical expenses for elderly and disabled individuals, the use of approximated shelter expenses for individuals in the 1985 panel, and measurement error in the collection of shelter and child care expenses in SIPP will cause some distortion of simulated net income. The SIPP definitions of shelter and dependent care expenses also differ slightly from the FSP definitions. For example, expenses incurred for the care of incapacitated adults are not included in the dependent care expenses in SIPP, and small amounts of shelter costs, such as water bills, are omitted.

- **Disability** status: The determination of disability status relied on reported disability and reported income receipts, as specified under the program. Reporting and measurement errors in SIPP may result in some distortion of the number of disabled individuals identified in this manner.

. Measurement error: Several forms of nonsampling errors affect the eligibility simulation, including the underreporting of income and program participation noted above; and the misclassification of benefit and income types.

The possible bias resulting from each of these measurement and reporting errors is shown in Figure A-l. The net result on estimates of the number of eligibles is uncertain. Underreporting of gross income will bias the estimates of eligible households upward, since more households will appear to have met the income limits than actually did. On the other hand, the omission of some types of expenses may bias the measurement of net income upward, thus decreasing the estimate of the number of eligible households. However, the inability to perfectly replicate program regulations in the calculation of deductions from expenses may result in the reverse effect. Furthermore, selected assets are omitted from our analysis file (for example, persons not present at the time of the interview have zero imputed vehicular assets), thus overestimating the size of the eligible population.

Finally, the underrepresentation of some groups of individuals biases the estimates of eligibles downward. As **illustrated** above, the SIPP data seem to underrepresent significantly households receiving public assistance. These households form a large portion of the eligible and participating populations. As a result, some of the participation rate estimates for these households exceed **100** percent.

C. IMPACT OF MEASUREMENT AND REPORTING ERRORS

While we cannot directly assess the full impact of the measurement and reporting errors, discussed in the previous section, some indications of the magnitude of the problems can be summarized by comparing the methodology of the study by Doyle and **Beebout (1988),**

FIGURE A-l

Factors Affecting The Simulation Of Food Stamp
Eligibility With SIPP And The
Direction Of The Bias

Source of Error	Effect on Estimates of the Number of Eligibles
Unit Definition	Underestimate
Countable Assets	Overestimate
Gross Income	
Underreporting	Overestimate
Definition	Underestimate
Program participation underreporting and misreporting	Underestimate of eligibles participating in other programs
Net Income	Unknown
Disability Status	Underestimate
Measurement Error	Unknown

which produced estimates of participation rates in August 1984, and that of this study. There are three areas which can be examined explicitly: (1) the impact of correcting the administrative data for benefits issued in error, (2) the impact of sampling and nonsampling errors on the determination of FSP participation rates, and (3) the impact of the methods for measuring financial asset balances. Each is discussed in detail below and summarized here.

- The adjustment of administrative data on program caseload by 3.67% and costs by 6.02% reduces individual and household participation rates by 2 percentage points and reduces benefit rates by 4 percentage points.

- There appears to be a bias in the SIPP data associated with the number of times respondents have been contacted Participation rates estimated solely in Wave 7 of the 1984 Panel are consistently higher than rates estimated solely on Wave 3 of the 1985 Panel. The combined panel estimation used in this report reduces this bias.

- The change in procedures used to measure financial asset balances between the August 1984 study and the current study increased the household participation rate. Both the 1984 and 1985 methodologies were applied to Wave 7 and the household participation rate was 2 percentage points higher using the 1985 methodology. The impact was strongest among households with no income, for whom the rate was 7 percentage points higher using the later methodology.

These methodological and sampling issues prohibit direct comparison between the August 1985 participation rates reported in Chapter III and the rates reported for August 1984 in Doyle and **Beebout** (1988). However, some patterns can be discerned, and are highlighted in the report where appropriate.

1. <u>Comparison Of Participation Rates Before And After **Adjustment** Of Program Operations Data For Errors In Issuance</u>

Participation rate estimates presented in the body of this report reflect total caseload and benefits derived from Program Operations data for August 1985, adjusted for errors in issuance. The number of participating households and persons was reduced by 3.67 percent **to** account for ineligible households to whom benefits had been issued in error. Total benefits

were reduced by 6.02 percent to account for benefits issued to those households. Tables A-l through A-3 list the rates which would have been computed had the adjustment to the numerators not been made. These are compared to the actual rates incorporated into the body of the text.

2. **Impact** Of **Sampling** And **Nonsampling** Errors On Estimates Of The Number Of Food **Stamp** Eligibles

Eligible households, persons, and benefits were estimated using microsimulation techniques on a sample of the U.S. population. Therefore, they are subject to both sampling and nonsampling errors. Sampling errors of the simulation estimates are difficult to estimate due to the existence of several stochastic procedures imbedded within the model. For example, medical expenses are imputed to the observations using a predictive model with a random error term drawn from a normal distribution. Measures of nonsampling errors are equally difficult to **quantify.** However, we can provide an indication of the range in estimates attributed to sampling and selected forms of nonsampling error because the underlying analysis file was developed through the combination of two independent samples of the population: Wave 7 of the 1984 Panel and Wave 3 of the 1985 Panel.

In this section we provide estimates of eligibles and participation rates based on three samples--Wave 7 alone, Wave 3 alone, and the two waves combined. Each set of estimates was developed in exactly the same manner, the only difference being the underlying data. Estimates of the numerator of the participation rates are the same as the numerators used in the body of this report. Estimates of eligibles from the three samples were simulated using the same model. Table A4 compares the three outcomes.

Overall, the participation rates vary by 1 to 5 percentage points. The household rate shows the least amount of variation, ranging from 58 percent based on Wave 3 alone to 59 percent for Wave 7 and for Waves 3 and 7 combined. The most variation occurs in the

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TABLE Al

Household Participation Rates
by Selected Household Characteristics,
Unadjusted and Adjusted for Errors in Issuance,
August 1985

	Participation Rates	
	Unadjusted	Adjusted by Reducing the Numerator By 3.67%
Text Table 2:		
Household Size		
1	51.6%	49.8%
2		
3	64.1 73.0	61.8 70.3
4	68.3	65.8
5	63.9	61.5
6+	77.1	74.3
Total		
Text Table 4:		
Households Containing:		
Elderly	38.7%	37.3%
Disabled	48.5	46.7
Children Under Age 18	76.7	73.9
Children Ages 5 to 17	77.5	74.7
Single Female		
With Children	77.7	74.8
Single Male		
With Children	47.6	45.8
Two or More Adults		
With Children	78.2	75.3
White Nonhispanic Head	50.8	48.9
Black Nonhispanic Head	80.0	77.1
Hispanic Head	56.9	54.8
Text Table 6:		
Households by Benefit Level		
<=10	28.3%	27.3%
11-25	45.6	43.9
26-50	46.8	45.1
51-75	62.9	60.6
76-100	70.2	67.6
101-150	75.5	72.7
151-200	91.0	87.7
201+	89.9	86.6

Table Al (Continued)

| | Participation Rates | |
	Unadjusted	Adjusted by Reducing the Numerator By 3.67%

Text Table 8:

Households by Income As Percent of Poverty

<=100	77.4%	74.6%
0	71.7	69.0
1-50	96.2	92.7
51-100	69.7	67.2
>100	15.4	14.8
101-130	15.8	15.2
131+	11.1	10.7

Text Table 10:
Households by Income Source

Earnings	38.2%	36.8%
SSI:		
Elderly	69.1	66.6
No Elderly	66.5	64.1
Total SSI	68.2	65.7
Public Assistance	119.9	115.5
AFDC	123.0	118.5
Other Welfare	101.1	97.4
Unemployment Compensation	78.5	75.6

Source: Participation rates are computed as the ratio of participants to eligibles.   Unadjusted participant counts are from the Food Stamp Program Statistical Summary of Operations.   Adjusted participant counts are also from the Food Stamp Program Statistical Summary of Operations but they were reduced by 3.67 percent to reflect the proportion of ineligible households issued benefits in error. Estimates of eligibles were derived from special tables prepared using the August 1985 analysis file developed from SIPP, 1984 and 1985 panels.   The SIPP analysis file contains 27,660 households in total and 3,559 households eligible for food stamps.

Individual Participation Rates
by Selected Characteristics,
Unadjusted and Adjusted for Errors in Issuance,
August 1985

	Participation Rates	
	Unadjusted	Adjusted by Reducing the Numerator By 3.67%
Text Table 3:		
Individuals by Demographic Characteristics		
Elderly Living Alone	42.8%	41.3%
Disabled Living Alone	54.4	52.4
Elderly Not Alone	31.5	30.4
Disabled Not Alone	46.5	44.8
Elderly Total	38.0	36.6
Disabled Total	49.3	47.4
Children Under Age 18	76.3	73.5
Children Under Age 6	78.1	75.3
Children Ages 5 to 17	75.5	72.7
Adults Ages 18 to 59	67.4	65.0
Total Persons	66.7	64.3

Text Table 7:		
Income As Percent of Poverty		
<=100	81.7%	78.7
0	72.3	69.7
1-50	95.5	92.0
51-100	74.7	71.9
>100	18.2	17.5
101-130	18.5	17.9
131+	12.7	12.3

Source : **Participation rates are computed as the ratio of participants to eligibles. Unadjusted participant counts are from the Food Stamp Program Statistical Summary of Operations. Adjusted participant counts are also from the Food Stamp Program Statistical Summary of Operations but they were reduced by 3.67 percent to reflect the proportion of ineligible households issued benefits in error. Estimates of eligibles were derived from special tables prepared using the August 1985 analysis file developed from SIPP, 1984 and 1985 panels. The SIPP analysis file contains 27,660 households in total and 3,559 households eligible for food stamps.**

Benefit Participation Rates
by Selected Household Characteristics,
Unadjusted and Adjusted for Issuance Errors,

	Unadjusted	By Reducing the Numerator by 6.02%
Text Table 5:		
Benefits to Households Containing:		
Elderly	45.5%	42.7%
Disabled	69.9	65.7
Children Under Age 18	87.6	82.3
Children Ages 5 to 17	89.8	84.3
Single Female with Children	81.0	76.1
Single Male with Children	50.5	47.4
Two or More Adults		
with Children	99.8	93.7
White Nonhispanic Head	73.2	68.7
Black Nonhispanic Head	92.2	86.6
Hispanic Head	65.0	61.0

	Unadjusted	By Reducing the Numerator by 6.02%
Text Table 9:		
Benefits to Households by		
Income As Percent of Poverty		
<=100	86.2	81.0
0	74.8	70.3
1-50	96.0	90.2
51-100	78.5	73.8
>100	17.4	16.3
101-130	18.0	16.9
130+	6.8	6.4

Source: Participation rates are computed as the ratio of benefits of participants to total benefits which would have been issued had all eligibles households participated. Unadjusted benefits to participants are from the Food Stamp Program Statistical Summary of Operations. Adjusted benefits to participants are also from the Food Stamp Program Statistical Summary Operations but they were adjusted down by 6.02 percent to account for benefits issued in error to ineligible households. Estimates of eligibles were derived from special tables prepared using the August 1985 analysis file developed from SIPP, 1984 and 1985 panels. The SIPP analysis file contains 27,660 households in total and 3,559 households eligible for food stamps.

Impact on Sampling and Nonsampling Error on Estimates of
Eligibles and Participation Rates,
August 1985

	Participants	Eligibles			Participation Rates		
		Wave 3/7	Wave 7	Wave 3	Wave 3/7	Wave 7	Wave 3
Persons	**18560**	28884	28669	29666	64.26	64.74	62.56
Households	**6894**	11604	11589	11821	59.41	59.49	58.32
Benefits	**807265**	1072262	1045559	1128494	75.29	77.21	71.53
Household by Size							
1	**2329**	**4649**	4752	4588	**50.09**	49.01	50.76
2	1481	2380	2287	2535	**62.21**	64.74	58.41
3	1217	1718	1770	1687	**70.81**	68.73	72.11
4	907	1369	1268	1532	**66.22**	71.49	59.17
5	506	817	833	812	**61.92**	60.73	62.30
6+	502	671	680	668	**74.82**	73.83	75.15
Household by Income							
<=0	475	**684**	652	744	**69.40**	72.81	63.81
1-99	135	282	316	266	47.70	42.57	50.57
100-199	662	652	753	541	101.52	87.90	122.34
200-299	1036	1052	1029	1098	98.50	100.70	94.37
300-399	1798	2436	2427	2461	73.83	74.10	73.08
400-499	1021	1921	1908	2014	53.13	53.49	50.68
500-599	684	1647	1682	1612	41.55	40.68	42.45
600-699	440	839	770	909	52.40	57.09	48.36
700-799	226	575	639	495	39.33	35.39	45.69
BOO-899	170	461	434	515	36.79	39.08	32.93
900-999	104	294	263	337	35.48	39.66	30.95
>=1000	190	761	716	828	24.98	26.55	22.96

benefit rates which are 72 percent for Wave 3 and 77 percent for Wave 7. Individual rates range from 63 to 65 percent.

The range in individual rates is driven by the variation in estimates of the number of eligible households of size 2 and size 4. Participation rates for households of size 2 for Wave 7 (65 percent) are almost 11 percent higher than the corresponding rates for Wave 3 (58 percent). The difference between the participation rates for households of size 4 is even more extreme (from 59 to 71 percent).

Household participation rates by level of gross income are highly volatile. While each set of rates varies in a similar manner by level of income, the actual participation rates are quite different across waves within each income class. For example, the rates for households with no income range from 64 percent to 73 percent. It is interesting to note that in most income classes, Wave 3 rates are lower than Wave 7 rates. There are simply more low-income, low-asset households in the Wave 3 file than in the Wave 7 file.

While the principal difference between Wave 7 and Wave 3 estimates of eligibles can be attributed to sampling error, there are some forms of nonsampling error which affect the outcomes. The first difference is that observations in Wave 7 of the 1984 Panel had been in the sample more than twice as long as those in Wave 3 of the 1985 Panel. Thus, sample attrition would affect the Wave 7 estimates more than the Wave 3 estimates because of the increased length of time from the initial interview. Furthermore, sample attrition has been shown to be nonrandom (Short and McArthur, 1985). In particular, low-income households have a higher attrition rate than middle-income households. This pattern of attrition may contribute to the fact that there are more eligibles from Wave 3 than from Wave 7.

The second difference between Waves 7 and 3 is the methodology employed to compensate for data not collected in those waves. Neither of these waves contained measures of child care, shelter or medical expenses, or disability status, as it is defined for the Food

Stamp **Program.** Medical expenses were imputed to both waves **using exactly the same procedures, and** thus do not contribute to the differences in estimates of eligibles except for the randomness associated with the assignment of the error term. However, each of the other expenses was assigned to the relevant wave using a slightly different method, as discussed below.

Child care expenses were collected in Wave 5 of the 1984 Panel and Wave 4 of the 1985 Panel. These were linked to Waves 7 and 3 using the procedures discussed in Doyle and Post (1988). The principal difference in how the data were linked was the timing of the child care wave relative to the analysis sample. Hence, the ease with which the data could be integrated varied to some degree. The differences are by no means dramatic. For example, in Wave 7 of the 1984 Panel, 11 percent of the unweighted sample cases were not interviewed in Wave 5, and thus child care expenses were imputed. In contrast, 23 percent of the unweighted sample cases in Wave 3 of the 1985 panel were not interviewed in Wave 4 when the child care topical module was administered.

Shelter expenses were collected in Wave 4 of the 1984 panel, but were not collected at all in the 1985 Panel. Hence, we had to impute these expenses to all households in Wave 3. In the 1984 panel, we needed only to impute expenses to 38 percent of the cases because the remaining cases were present in both Waves 4 and 7 and did not change addresses. Therefore, estimates of the shelter deduction are subject to more error in Wave 3 than in Wave 7.

Disability status is a function of income available in both Waves 7 and 3, as well as reasons for receiving benefits from certain programs, which is determined during the **first** interview. The difference in the timing of each wave relative to the first interview is more than one year, and, hence, there is more error in the determination of disability status in Wave 7 than in Wave 3.

3. <u>Impact Of Asset Measures On Estimates Of Eligibles And Participation Rates</u>

The estimates of food stamp eligibles in 1984 and 1985 are not directly comparable because of a difference in the procedure **used** to construct countable assets. Hence, estimates of the participation rates between the two years will appear to vary in some instances where in fact they are comparable. In thii section of the appendix, we provide an analysis of the impact of the change in participation rates attributed to the change in procedures for determining asset balances. This analysis is based solely on Wave 7 1984 **panel;** thus, rates used differ from the participation rates in the body of this report.

The method of determining assets in estimating 1984 participation rates was to construct estimates of nonvehicular assets by dividing asset income by an assumed rate of return on investment and then combine the results with countable vehicular **assets.**[19] The method of determining assets in estimating 1985 participation rates was to accumulate the countable value of reported balances in income- and non-income-producing nonvehicular assets and combine that with countable vehicular assets. Hence, the difference in methods lies in the treatment of nonvehicular assets. Both methods were applied to the observations in Wave 7 and the results are compared in Table AS.

Overall, the impact of the change in asset procedures was to decrease the number of eligibles and increase the participation rate. In particular, the procedure used in 1984 tended to understate the amount of countable financial assets held by the low-income population. This is not unexpected given that the rate of return used to estimate asset balances was an average over the entire population rather than an average appropriate for the low-income population.

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[19] **There** was an **adj**ustment of the balances recorded in the original SIPP data file in cases of item nonresponse. The Census Bureau developed imputed data for these items but an analysis of the quality of those data indicated that the imputations did not perform well for the low-income population. Hence, these values were reimputed as described in **Mathematica** Policy Research, Inc. **(1990).**

TABLE A5

Impact of Asset Measures on Estimates of Eligibles
and Participation Rates,
August 1985

| | | Eligibles | | Participation | Rate |
| | | Wave 7 | Wave 7 | Wave 7 | Wave 7 |
	Participants	Final	ROR[1]	Final	ROR
Persons	18560	28669	29613	64.74	62.67
Households	6894	11589	12037	59.49	57.28
Benefits	807265	1045559	1070891	77.21	75.38
Household by Size					
1	2329	4752	4962	49.01	46.93
2	1481	2287	2399	64.74	61.72
3	1217	1770	1814	68.73	67.06
4	907	1268	1308	71.49	69.31
5	506	833	854	60.73	59.24
6+	502	680	699	73.83	71.82
Household by Income					
<=0	475	652	720	72.81	65.93
1-99	135	316	309	42.57	43.53
100-199	662	753	740	87.90	89.44
200-299	1036	1029	1083	100.70	95.68
300-399	1798	2427	2452	74.10	73.35
400-499	1021	1908	1995	53.49	51.16
500-599	684	1682	1759	40.68	38.90
600-699	440	770	791	57.09	55.58
700-799	226	639	674	35.39	33.55
800-899	170	434	455	39.08	37.28
900-999	104	263	265	39.66	39.36
>=1000	190	716	793	26.55	23.97

[1] Countable financial assets were estimated based on assumed rate of return in investment. Otherwise, eligibility and participation rates were determined in the same manner as the Wave 7. Final estimates of eligibles and participation rates.

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The impact was fairly uniform across all three measures (all three participation rates computed using the 1985 procedures were 2 percentage points higher than the rates computed using the 1984 procedures). The rates did not change drastically for any household size group, and the changes in rates by income class were mixed. The participation rate among eligible households with no income rose by 7 percentage points when the methodology was changed from the 1984 to 1985 procedures. This is disproportionate in comparison to other income classes, except the $200 to $299 class, where the rate rose 5 percentage points. In all other income classes, rates only changed by one to two points.

Current Perspectives on Food Stamp Program Participation

United States
Department of
Agriculture

Food and
Nutrition
Service

Office of
Analysis and
Evaluation

Food Stamp Program Participation Rates: January 1988

Current Perspectives on Food Stamp Program Participation

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United States
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Food Stamp Program
Participation Rates:
January 1988

Carole Trippe and Pat Doyle

ACKNOWLEDGMENTS

Alanaroject Officer:

$2,854,698.

CONTENTS

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TABLES

TABLES (continued)

The Food and Nutrition Service publishes periodic reports on Food Stamp Program (FSP) participation rates to help understand the extent to which food stamp benefits reach the intended recipients. Food *Stump Program Participation Rates: January 1988*, the latest in the series, shows a small but noticeable decline in the participation rates between August 1985 and January 1988. The likely reasons behind this drop offer some interesting insights into the interaction between changes in eligibility rules and participation in the program.

IMPORTANCE OF PROGRAM PARTICIPATION RATES

The participation rate is the ratio of the number of individuals or households participating in a program to the number of those eligible for the program. The rate of participation in a public assistance program *is a* valuable measure of the *program's* overall performance. Although it is highly unlikely that any assistance program could achieve 100 percent participation among all those who are eligible for benefits, the participation rate can provide insights for policy makers who are concerned with reaching specific target populations. For example, comparisons of the overall participation rate with the rates for subsets of the eligible population can indicate the program's relative ability to reach these groups.

EFFECTS OF LEGISLATIVE CHANGES ON PARTICIPATION RATES

The Food Stamp Program participation rate can change as the number of persons participating in or the number of persons eligible for the program change. The number eligible for benefits shifts periodically as Congress expands or restricts eligibility rules. The numbers of participants and eligibles also fluctuate with changing economic conditions.

Legislative changes to the FSP implemented in May 1986 under the authority of the Food Security Act (FSA) of 1985 made the program more generous by expanding the number of individuals eligible to receive food stamps. Among other changes, the FSA granted automatic food stamp eligibility to households in which all members receive Aid to Families with Dependent Children or Supplemental Security Income, and raised the dollar amount of countable assets that households with no elderly and households of elderly living alone could own and still qualify for food stamps. Newly available data for 1988 enable us to examine the effect of these *expansions* on FSP participation rates.

CHARACTERISTICS OF NEW ELIGIBLES

The combined changes implemented in 1986 made an estimated 1.9 million more people, residing in 865,000 households, eligible for food stamps in 1988. The vast majority of the newly eligible were made eligible by the new asset provisions. In January 1988, 40 percent of newly eligible households consisted of elderly individuals who lived alone. A little over half consisted of households with no elderly, most of whom contained children and received earnings. Less than half of the newly eligible population had income below the poverty level. Thus, the increase in the eligible population was concentrated largely among single elderly persons, nonelderly with earnings and children, and

households whose income was above poverty. The following table shows the breakdown of new eligibles by these characteristics and by their rates of program participation in January 1988.

	Newly Eligible Households	Participation Rates Among Newly Eligible Households
Households with:		
Elderly	49%	6%
Living alone	40%	6%
Living with others	9%	6%
Nonelderly	51%	7%
With children	33%	7%
With earnings	28%	8%
Income above poverty level	52%	8%
Total	100%	6%

All told, *only seven percent of newly eligible individuals participated in the Food Stamp Program in January 1988* (compared to 59 percent of all eligible individuals).

Historically, households eligible for relatively low benefits and households that contain elderly members and wage earners have participated in the FSP at lower-than-average rates. In this light, it is less surprising that so few of those made eligible by the FSA had joined the FSP in the year and a half between the 1986 implementation of FSA changes and January 1988. Economic expansions from 1986 to 1988--and the accompanying reductions in the unemployment and poverty rates--may also have created an environment in which those eligible for small benefits were less inclined than usual to seek public assistance.

OVERALL EFFECTS OF RESPONSES TO THE FOOD SECURITY ACT

The increase in eligibles brought about by the FSA has had a series of consequences, ultimately ending in a marked decrease in the overall FSP participation rate:

- Very few of those made newly eligible by the FSA changes joined the program between implementation of the changes and January 1988.

- Since so few new people joined the program, the overall number of participants remained relatively steady from August 1985 to January 1988. The number of participating individuals declined by about one percent from 1985 to 1988, while the number of eligible individuals increased by seven percent.

- Since the program participation rates reflect the ratio of participants to eligibles, the increase in the number of eligibles combined with the lack of change in the number of participants reduced the overall participation rates for January 1988. The following table summarizes the actual participation rates in August 1985 and January 1988 and the expected rates in January 1988 had pre-FSA program rules still been in effect.

	August 1985 Actual	January 1988 Actual	January 1988 Pre-FSA
Individuals	64%	59%	63%
Households	59%	56%	60%

Nearly all of the decline in the Food Stamp Program participation rates can be attributed to low participation among those made newly eligible under the FSA. The rates in January 1988 would have been almost the same as those in August 1985 if pre-FSA program rules had been in effect in 1988.

CONCLUSION

The decline in FSP participation rates resulting from the Food Security Act of 1985 demonstrates how sensitive program participation rates are to participation among newly eligible groups. However, since participation among new eligibles also varies over time, it is important to realize that the 1985-1988 drop in participation rates may stabilize or reverse in the future. The number of FSP participants has been climbing steadily since the spring of 1989, and there were over six million more people receiving food stamps in December 1991 than in January 1988. If these new participants are coming from the pool of previously nonparticipating eligibles, participation rates will rise. The Food and Nutrition Service expects to have participation rates for this critical time of expanded caseloads by late 1993.

Office of Analysis and Evaluation
Food and Nutrition Service, USDA
February 1992

EXECUTIVE SUMMARY

Policymakers are concerned about the extent to which the Food Stamp Program (FSP) serves its target population, as well as which subgroups are more or less likely to participate in the program. This report is the third in a series of reports that provides estimates of FSP participation, and is based on more accurate data on eligibles and participants than have previously been available. It is also the first report following the enactment and implementation of the Food Security Act of 1985, which was the first in a series of recent legislative actions which expanded eligibility for the FSP.[1]

The FSP participation rate is the ratio of the number of persons (or households) who participate in the FSP (or the actual benefits paid to participants) to the number of persons (or households) who are eligible for the program (or the total benefits payable if all eligible households participated). The estimates presented in this paper indicate that in the 50 states and the District of Columbia in January 1988--

* 59 percent of the eligible individuals participated in the FSP.

- 56 percent of the eligible households participated in the program.

- Participating households received 67 percent of the benefits payable had all eligible households participated.

COMPARISON OF JANUARY 1988 AND AUGUST 1985 PARTICIPATION RATES

Participation rates declined slightly between 1985 and 1988 due to the lack of an immediate response to the more generous eligibility criteria introduced under the 1985 Food Security Act (FSA), implemented in May 1986. As shown in the following table, the FSA accounts for almost all of the decline in participation rates among persons and households. In the absence of the FSA, the January 1988 household participation rate would have been almost identical to the August 1985 rate (59.8 percent compared with 59.4 percent).[2] The more generous eligibility criteria increased the number of total eligible households by 7 percent, but increased the number of participating households only by less than 1 percent. Hence, the participation rate among the newly eligible households was very low--only 6 percent, compared with a participation rate of 56 percent among all eligible households.

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[1]The other legislation that expanded FSP eligibility includes the 1987 Stewart McKinney Homeless Assistance Act (PL 100-77), the 1988 Hunger Prevention Act (PL 100-435), and the Food, Agriculture, Conservation, and Trade Act of 1990 (FACT). These program changes affected a relatively small group of households.

[2]Similarly, the individual participation rate would also have been almost identical (63 percent in January 1988 under pre-FSA rules, compared with 64 percent in August 1985), and the benefit rate would have been much closer under the pre-FSA rules (71 percent, compared with 75 percent).

IMPACT OF THE 1985 FOOD SECURITY ACT ON FSP PARTICIPATION RATES IN JANUARY 1988

	Participation Rates (Percent)			
	January 1988 (Actual)	January 1988 (Simulated Pre-FSA)	August 1985 (Actual)	January 1988 Implicit Rate Among Newly Eligible
Individuals	59.0%	62.5%	64.3%	6.6%
Households	56.0	59.8	59.4	6.1
Benefits	66.7	70.7	75.3	6.9

Similarly, the participation rate among newly eligible persons and among benefits to newly eligible households was only 7 percent. Therefore, the FSA legislation expanded eligiiility for the FSP, but most of those who became eligible did not participate, thus lowering participation rates overall.

The provisions of the FSA that affected the greatest number of households were those that raised the asset limits, particularly for households that contained single elderly persons. About 40 percent of the newly eligible households were comprised of single elderly persons (only 21 percent of all eligible households contained single elderly persons). Thus, participation rates among households containing elderly and single persons declined more than among other groups. However, in the absence of the FSA, participation rates among these and many other subgroups of the eligible population would have increased or remained about the same as in 1985.

Changes in Participation since 1988

FSP caseload data show that participation in the FSP has risen substantially since 1988, beginning in the third quarter of fiscal year 1989 (FY89.3). Between FY89.2 and FY90.2, participation in the FSP increased by over 1 million persons. Since FY90.2, participation has continued to rise, reaching 25 million in December 1991. If forthcoming data show that the subsequent increase in the number of eligibles is less than the observed increase in the number of participants since 1988, then the participation rate will rise.

ESTIMATES OF PARTICIPATION RATES BY SELECTED DEMOGRAPHIC CHARACTERISTICS

The January 1988 participation-rate estimates vary considerably across selected demographic groups:

- Regardless of the participation measure used (individual, household, or benefit), preschool children and school-age children participated at higher-than-average rates. For example, the individual rates were 75 percent for preschoolers and 67 percent for school children. The benefit rate for households with school children was 71 percent, compared with an overall benefit rate of 67 percent.

- However, among the elderly, only 34 percent of eligible individuals participated, although the rate was higher among those who lived alone (38 percent), and was still higher among those who received Supplemental Security Income (SSI) (70 percent).

- Among the disabled, 55 percent of the eligible individuals and eligible households participated, receiving 59 percent of the benefits payable had participation been 100 percent.

- Among households headed by a single woman with children, approximately 76 percent participated.

- Households headed by black, non-Hispanic individuals participated at a much higher rate (76 percent) than households headed by white, non-Hispanic individuals (47 percent) or Hispanic individuals (54 percent).

ESTIMATES OF PARTICIPATION RATES BY SELECTED ECONOMIC CHARACTERISTICS

The January 1988 participation-rate estimates also vary among eligible individuals and households with different economic characteristics:

- Participation rates generally varied inversely with income. That is, participation rates declined as income rose. Individuals and households in poverty participated at considerably higher rates (72 percent and 70 percent, respectively) than individuals and households overall (59 percent and 56 percent, respectively).

- Participation rates were greater among those who were eligible for larger benefits; the household rates ranged from 30 percent for monthly benefits of 1 percent to 25 percent of the maximum allotment to 91 percent for monthly benefits of 76 percent to 99 percent of the maximum allotment.

- Households with earnings had a lower-than-average participation rate (34 percent), whereas households that received SSI or public assistance participated at higher-than-average rates (75 and 111 percent, respectively).[3]

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[3]The greater than 100 percent figure among public assistance recipients is due to measurement and sampling errors in the data.

THE CHARACTERISTICS OF ELIGIBLE NON-PARTICIPANTS

Approximately 5.4 million of the 12.3 million households eligible for food stamps did not participate in the program. These households comprised 12.7 million persons eligible for $445 million in benefits. About half of the eligible nonparticipants had an income above the poverty line; 43 percent were eligible for a monthly benefit of 1 to 25 percent of the maximum allotment. The nonparticipants comprised roughly four equal groups: households with elderly persons, both above and below the poverty line, and households with workers, both above and below the poverty line. Elderly nonparticipating households tended to consist of a single individual, while nonelderly nonparticipating households tended to consist of the working poor with children. Most of the persons in eligible nonparticipating households with incomes above poverty were eligible for small monthly benefits ($17 on average in January 1988), and, hence, their lack of participation is not surprising.

I. INTRODUCTION

The Food Stamp Program (FSP) provides assistance to low-income households to help them buy the food they need to obtain a nutritious diet. A food stamp household is generally defined as a person who lives alone, or as a group of persons who live together and share food purchases and meal preparation and whose monthly income and assets fall below specified limits. The assistance is provided in the form of coupons that can be redeemed for food purchases. The amount of the coupons is based on the size and income of the household.

Not all households eligible for food stamps participate in the program. The literature on the program suggests a variety of reasons for nonparticipation.[1] Some persons may be unaware of the program, while others may presume that they are not eligible for benefits.   Other persons may be aware of the program and their own eligibility for it, but feel that the benefits are not worth the effort required to obtain and use them. Still others may not participate due to the stigma they associate with using food stamps.

Obviously, since some eligible households do not apply for benefits, the FSP is not serving the entire population targeted by the legislation that established the program. Indeed, according to conceptual models of the decision to participate in the program, participation should not be expected to be universal (see Allin and Beebout, 1989). But even if participation will never be universal, the Congress and other policymakers are interested in the proportion and characteristics of the eligible population that does participate in the program. They are also interested in the subgroups of the target population that are most likely to participate in the program, as well as in the characteristics of persons who are eligible for but do not participate in the program.

This paper is the seventh in a series that have examined current issues on FSP participation. It is the third that provides estimates of rates of participation in the FSP, both among the total eligible

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[1]Allin and Beebout (1989) review the literature.

population and among selected subgroups of that population that are of particular interest to policymakers.[2] It is the first paper in the series to examine the influence of the 1985 Food Security Act (FSA) on participation rates. The 1985 **FSA was** the first and the most major of a number of legislative changes that expanded eligibility and increased benefits under the FSP in the late 1980s and early 1990s. Other expansive changes included the 1987 Stewart McKinney Homeless Assistance Act (PL 100-77), the 1988 Hunger Prevention Act (PL 100-435), and the Food, Agriculture, Conservation, and Trade Act of 1990 (FACT).

This paper finds that the lack of response to the more generous eligibility criteria of the 1985 FSA, implemented in May 1986, caused a downward shift in participation rates between 1985 and 1988. Only a small proportion (6 percent) of the newly eligible households chose to apply for and participate in the program. In the absence of the FSA, overall participation rates in 1988 would have been almost the same as in 1985. In fact, among many subgroups of the eligible population, participation rates would be even higher in 1988 than in 1985 in the absence of the FSA.

The estimates in this series of papers are more accurate than most previous ones, primarily because the estimates of eligibles in this series are based on the Survey of Income and Program Participation (SIPP).[3] Because eligibility for the FSP cannot be observed directly, the denominator of the participation rate (the total number of program eligibles or total potential benefits) must be approximated on the basis of household survey data. Relative to the household surveys used in previous research, such as the Current Population Survey (CPS), SIPP contains a greater amount of and more detailed information on the household characteristics that FSP administrators must consider

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[2]The first two papers provided estimates of participation rates for August 1984 (Doyle and Beebout, 1988) and August 1985 (Doyle, 1990). Due to the substantial methodological improvements made to the estimation procedures since the August 1984 rates, only the August 1985 and the January 1988 rates are strictly comparable.

[3]Trippe (1989) reviews the literature on FSP participation rates and estimation techniques.

when making actual eligibility **determinations.**[4] For example, SIPP contains information on monthly (as opposed to annual) income, monthly household composition, most of the expenses used **to** calculate deductions from income, and vehicular assets, thereby significantly advancing our ability to approximate eligibility status with survey data

Data for the numerator of the overall participation rate (the number of program participants or total benefits paid) were derived from the Food Stamp Program Statistical Summary of Operations (hereafter referred to as Program Operations data) and were adjusted to account for benefits issued in error in January **1988.**[5] These administrative data are more accurate than the self-reported survey data used in some previous studies of FSP participation, because research indicates that food stamp receipt is substantially underreported in household survey data. Because the numerators of the ratios reported herein are based on administrative counts, they are more reliable estimates of the number of actual participants and the amount of benefits paid. However, Program Operations data do not contain information on subgroups of the participating population. Estimates for these groups were calculated from a sample of food stamp case records from the Integrated Quality Control System (IQCS) of the U.S. Department of **Agriculture.**[6]

Although our SIPP-based estimates represent an improvement over previous results, they are not without their own sampling and measurement limitations. In particular, the underreporting of public assistance income and receipt common to all household surveys yields unrealistic estimates of food stamp participation rates among public assistance households. Furthermore, the survey does not provide all of the information necessary to determine the food-stamp-eligible unit precisely in all

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[4]**The** exception to this comparison is the 1979 Income Survey Development Program Research Test Panel (ISDP), the precursor to **SIPP.**

[5]**The** Food Stamp Program Statistical Summary of Operations is a monthly record of benefits issued and the caseload served by the Food Stamp Program.

[6]**The** IQCS is a system of ongoing case record reviews designed to measure payment error rates in the Food Stamp, Aid to Families with Dependent Children (AFDC), and Medicaid programs. The IQCS is based on monthly probability samples drawn from all 50 states and the District of Columbia; this study uses active cases in the January/February **1988** samples.

households. Finally, a number of persons who reported SSI receipt in **SIPP** appeared to be ineligible for SSI due to high income or assets, causing potential problems in the estimate of pure SSI households who are automatically eligiile for the **FSP** under the provisions of the 1985 **FSA.** In short, although this analysis represents a considerable improvement over most previous efforts, perfect statistics on the FSP-eligible population or on subgroups that participate in the program are unattainable. Further research can reduce, but not eliminate, the uncertainties in estimation.

The remainder of this report is organized as follows. Chapter **II** summarizes the methodology and data used to estimate participation rates. Chapter III presents the overall participation rates for January 1988, the rates disaggregated by selected demographic and economic characteristics, and the characteristics of those eligibles who did not participate. Chapter IV compares the January 1988 participation rates with the August 1985 participation rates provided in Doyle **(1990),** and assesses the impact of the 1985 Food Security Act (FSA) on participation rates. The Appendix describes the technical procedures used to compute participation rates and to assess the impact of the 1985 FSA on participation rates.

II. METHODOLOGY AND DATA

This describes our methodology for constructing the January 1988 FSP participation rates. Three rates are introduced and defined, followed by a discussion of how they are computed. The latter discussion also describes the criteria that FSP administrators use to make eligibility and benefit determinations, as well as the model of those criteria that we used to estimate the number of eligibles with SIPP data.

A. THREE ALTERNATIVE MEASURES OF FSP PARTICIPATION

No single measure of participation can adequately answer all the questions that policymakers have about FSP participation. The three measures discussed in the literature--the individual rate, the household rate, and the benefit rate-differ in terms of their magnitude and their advantages and limitations for answering a given question. Here, we define each measure, specify its potential usefulness, and explain its application in previous studies.

1. The Individual Participation Rate

The individual participation rate is a ratio of the number of persons participating in the FSP to the number of persons eligible for the program. Policy discussions about FSP participation rates often rely on research results based on the individual rate, whereas discussions about participation behavior usually rely on a model of the household as the decision-making unit. In some instances, the individual rate may be preferable to the household rate, especially for answering questions about the participation of a particular subgroup of the target population. For example, the proportion of eligible elderly individuals who participate in the FSP is a better indication of the behavioral patterns of the elderly than is the proportion of eligible households that contain an elderly member who participates.

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2. The Household Participation Rate

The household participation rate is the ratio of the number of food stamp units, or households, that participate in the program to the number of households eligible for the program. As just noted, analyses of participation behavior tend to rely on this rate because they assume that the household is the decision-making unit. The definition of the household as the decision-making unit is derived from program rules that determine eligibility and benefits for households, not for individuals. The household rate can differ significantly from the individual rate because larger households are more likely than one-person households to participate in the FSP.

3. The Benefit Rate

The benefit rate is the ratio of the benefits paid to program participants to the total potential benefits payable if all program eligibles participated Although it has not been used extensively in previous research, the benefit rate may be the best overall measure of how well the FSP is meeting the target population's need for assistance. The benefit-rate estimates reported herein are generally higher than the individual- and household-rate estimates, indicating that households with higher benefit levels, and thus greater need, are more likely to participate than households with lower benefit levels.

B.   ESTIMATION OF PARTICIPATION RATES

We used administrative data derived from three sources to estimate the numerators in the participation rate ratios (as described in the Appendix). The first source is the Program Operations data, which provided the number of persons and households that were issued benefits in January 1988 and the total dollar value of the coupons issued. We adjusted these data to eliminate ineligible participants and erroneous benefits as determined from the IQCS. Finally, we distributed the adjusted total number of participating households and persons and their benefits across various

demographic and economic characteristics according to information derived from a sample of case records active in January and February 1988.[1]

We used the procedures outlined in the Appendix to develop estimates of the denominators of the participation rate ratios from SIPP. In essence, a model of the food stamp eligibility criteria determined which SIPP respondents belonged in the sample of program eligibles. This model relied on a simulation procedure whereby we quantified program rules and applied them to each dwelling unit in the SIPP sample in January 1988. For units determined to be eligible via this simulation, we estimated their composition and potential benefits. Below, we summarize the criteria that program administrators use to determine eligibility and benefits.

Eligibility for the FSP is based on a series of rules that define the applicant's need, which is deemed to be a function of available cash income conditional on unit (household) size, as well as the assets accessible to the unit.' The determination of need for each household that applies for FSP benefits can be disaggregated into four distinct components: (1) income limits, (2) asset limits, (3) nonfinancial standards, and (4) benefit levels. The parameters of each of these components vary over time with cost-of-living adjustments and legislated changes in the program. This analysis relies on the FSP criteria in existence in January 1988, the month corresponding to the administrative and SIPP data used.

The income test comprises two parts: a net income and a gross income screen. Under the net income screen, the monthly gross income net of allowable expenses must fall below the monthly federal poverty guidelines, which vary by household size and geographic location.[3] Under the gross

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[1]This sample of cases was developed in the process of preparing an annual report on the characteristics of food stamp households (U.S. Department of Agriculture, 1990).

[2]The discussion that follows is an overview of the regulations that govern FSP eligibility and benefits. The complete regulations appear in the *Code of Federal Regulations (7 CFR* parts *270-273).* Doyle and Beebout (1988) provide more in-depth summary of those regulations.

[3]The income limits are based on the official monthly poverty guidelines published by the U.S. Department of Health and Human Services (DHHS), which are adjusted each year to account for
(continued...)

income screen, food stamp units that do not contain elderly or disabled members must also have gross incomes below 130 percent of the same poverty guidelines. In January 1988, the program measured gross income, all cash income received by members of the food stamp household excluding the earnings of students under **age** 18, loans, nonrecurring lump-sum payments, and reimbursements for certain expenses. Net income was defined as gross income less a standard deduction, an earnings deduction, and deductions for expenses incurred for child care, medical, and shelter costs.[4]

Two different asset limits are imposed. In 1988, a food stamp household could have countable assets (or "resources," as they are called in the administration of the program) of $2,000 or less and remain eligible for benefits. If the household contained an elderly person, the asset limit was $3,000. Selected pieces of property, such as the principal home, adjacent land, most household goods, and vehicles necessary for producing income or for transporting disabled individuals, are not considered countable resources, but all other financial and nonfinancial assets are generally included. In most instances, assets are counted at their fair market value as long as they are accessible to at least one member of the food stamp household. The principal exception is the treatment of vehicular assets.'

Nonfinancial eligibility standards include the definition of the program unit and the characteristics of the unit (such as the presence of an elderly member) that affect eligibility. In general, food stamp benefits are issued to "households," but aspects of the program unit definition distinguish the term

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[3](...continued)
inflation. The income guidelines and other **FSP** parameters are generally the same for the 48 contiguous states and the District of Columbia and vary slightly for Alaska and Hawaii and the territories.

[4]The medical deduction is allowed only for medical expenses incurred by elderly or disabled members of the household.

'Vehicles required for work-related travel, and one additional vehicle owned by members of the food stamp household, are valued at the current Blue Book value, and only the amount that exceeds $4,500 is considered to be an available resource. Any remaining vehicles owned by members of the household are subject to both a market-value test and an equity test. The maximum of market value, less $4,500, and the equity is counted towards the household's assets.

from the Bureau of the Census' designation--namely, a group of individuals who share living quarters.[6] The food stamp household consists of a person who lives alone, or persons who live together and share food purchases and meal preparation, with some exceptions for households that contain elderly individuals who are unable to prepare their own meals. Restrictions are imposed on the food stamp household to prevent spouses, siblings, and parents with children under age 18 from forming separate units within a dwelling unit even if they purchase and prepare meals separately.' Furthermore, selected individuals within a dwelling unit are excluded from FSP participation. They include illegal aliens, persons who refuse to comply with work registration requirements, strikers, and residents of most institutions. The FSP also contains several provisions that require able-bodied adults to work, seek training in preparation for work, or look for work Individuals not exempt from these work registration requirements are prohibited from participating in the program if they refuse to comply. Finally, food stamp households consisting entirely of persons participating in the SSI or AFDC programs are automatically eligible for food stamps, regardless of their income and asset holdings.

Households deemed eligible according to these criteria receive benefits that are computed as the difference between the maximum food stamp benefit for their household size and geographic location and 30 percent of their net monthly income.[8] In January 1988, the maximum food stamp benefit in the continental United States was $290 for a family of four. Households of size one or two whose benefit computation is less than $10 in coupon value are issued a minimum benefit of $10.

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[6]Groups of individuals who share living quarters are referred to as "dwelling units" or "Census households." The latter term is significant in this analysis because the dwelling unit is commonly the interview unit used by the Census Bureau to collect survey data on the U.S. population. Specifically, as noted in the "Introduction," the dwelling unit is the interview unit for SIPP.

'The Stewart B. McKinney Homeless Assistance Act (P.L. 100-77) relaxed these restrictions for certain households. This Act grants a separate household status for parents of minor children who live with siblings or parents (the grandparents of children) if they purchase and prepare food separately.

[8]The maximum food stamp benefit in 1988 was equal to the Thrifty Food Plan for a family of four, adjusted for the size of the unit according to economies of scale.

III. RESULTS

Almost 7 million households in the 50 states and the District of Columbia participated in the Food Stamp Program in January 1988 (Table **III.1).** Based on the estimates prepared from SIPP, 12.3 million households were eligible for the program in that same month. Thus, the overall household participation rate was 56 percent. The overall individual rate was higher: 18.3 million individuals of 31.0 million eligible individuals, or 59 percent, participated in the FSP.

The estimates indicate that approximately $1.33 billion in coupons would have been issued to food stamp participants had the participation rate in January 1988 been 100 percent. The FSP issued 67 percent of those benefits. This percentage is consistent with the finding (shown later) that households entitled to higher benefits participated at higher rates than those entitled to lower benefits.

The fact that the benefit rate was higher than the individual rate, which in turn was higher than the household rate, implies that, in addition to other factors, both the size of the household and its potential benefit influence the decision to participate. The influence of household size and other demographic characteristics on the tendency to apply for benefits is outlined in Section **A;** the influence of potential benefits and other economic characteristics is discussed in Section B. Section C discusses the characteristics of eligible households that did not participate in the FSP in January 1988.

A. PARTICIPATION BATES BY SELECTED DEMOGRAPHIC CHARACTERIS'I'ICS

Table III.2 presents household participation rates disaggregated by the size of the eligible household. Most eligible households are relatively small, as are most participating households. Yet the participation rate tended to be higher for larger households, with single-person households participating at a substantially lower rate (45 percent) than all eligible households (56 percent).

TABLE III.1

INDIVIDUAL, HOUSEHOLD, AND BENEFIT
PARTICIPATION RATES: JANUARY 1988

	Participants	Eligibles	Participation Rate
Individuals (1,000)	18,286	30,973	59.0%
Households (1,000)	6,882	12,292	56.0
Benefits (1,000)	$890,158	$1,334,779	66.7
Average Household Size	2.7	2.5	
Average per-Capita Benefit	$48.7	$43.1	

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Estimates for eligibles were derived from tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

TABLE III.2

HOUSEHOLD PARTICIPATION RATES BY
HOUSEHOLD SIZE: JANUARY 1988

Household Size (number of persons)	Number of Participating Households (1,000)	Number of Eligible Households (1,000)	Household Participation Rate
1	2,188	4,867	45.0%
2	1,478	2,421	61.1
3	1,291	1,913	67.5
4	941	1,435	65.6
5	520	809	64.3
6+	463	847	54.6
Total	6,882	12,292	56.0

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Counts of participants were distributed across subgroups of the population based on a sample of 11,012 food stamp case records from the IQCS for January and February 1988. Estimates for eligibles were derived from tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

Other research supports the finding that FSP participation generally increases with the size of the eligible household. For example, **Allin** and Martini (forthcoming) used the August 1985 **SIPP** to perform a multivariate analysis of the relationship between household characteristics and FSP participation, and found a 20 percentage point increase in predicted participation rates between **one-**and three-person households in August 1985.[1]

Table III.3 presents individual participation rates dkaggregated by selected demographic characteristics. The table shows that the FSP was serving a large majority of children in eligible households in January 1988. Three-fourths of eligible preschool children (that is, children under age 5) resided in households that participated in the program. Among school-age children, this rate was 67 percent. Females participated at a slightly higher rate than males (60 percent versus 58 percent).

The participation rate for elderly individuals (34 percent) was much lower than both the overall rate for individuals (59 percent) and the rate for adults ages 18 to 59 (57 percent). The participation rate for disabled individuals (55 percent) was slightly lower than the overall rate for eligible individuals and adults. **Allin** and Martini found similar results among elderly in the multivariate analysis: the participation rate for households that contained elderly persons was 14 percentage points lower than the overall rate for households. However, they found the participation rate for households that contained disabled members was 12 percentage points higher than the overall rate for households.

Among elderly and disabled persons, participation rates are higher for those who live alone (38 percent and 69 percent) than for those who live with others (27 percent and 49 percent). The higher participation rates for elderly who live alone is surprising, given that overall participation rates for all single-person households are lower than average. This finding may suggest that elderly and

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[1]**Allin** and Martini conducted multivariate analyses of the relationship between the demographic and economic characteristics of households and FSP participation. They present participation rates computed two ways: predicted participation rates, computed on the basis of the coefficients of the participation equation with August 1985 **SIPP;** and univariate participation rates, computed as the number of self-reporting participating households divided by the estimated number of eligible households from the August 1985 SIPP.

TABLE III.3

INDIVIDUAL PARTICIPATION RATES BY SELECTED
DEMOGRAPHIC CHARACTERISTICS: JANUARY 1988

	Number of Participating Individuals (1,000)	Number of Eligible Individuals (1,000)	Individual Participation Rate
Elderly Age 60 or Older	1,516	4,524	33.5%
Living alone	1,009	2,626	38.4
Living with others	507	1,897	26.7
Disabled under Age 60	657	1,187	55.3
Living alone	253	368	68.6
Living with others	404	819	49.4
Children under Age 18	9,298	13,375	69.5
Preschool	3,126	4,176	74.8
School-age	6,172	9,199	67.1
Adults Ages 18 to 59	7,439	13,073	56.9
Living alone (not disabled)	909	1,347	67.5
Gender			
Male	7,468	12,851	58.1
Female	10,802	18,121	59.6
Total	18,286	30,972	59.0

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Counts of participants were distriiuted across subgroups of the population based on a sample of 11,012 food stamp case records from the IQCS for January and February 1988. Estimates for eligibles were derived from tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

disabled persons who live with others have greater access to outside resources that reduce their likelihood of participating. This finding is consistent with SSI participation rates among elderly individuals eligible for SSI that were derived from March 1988 CPS data, but contradicts the results based on 1985 SIPP data. Based on March 1988 CPS data, Shiels et al. (1990) found that elderly individuals who live independently were more than twice as likely as elderly who lived in the home of others to participate in the SSI program (56 percent versus 25 percent). However, based on 1985 SIPP, they found that the participation rate among elderly individuals who lived alone was lower than among those who lived in the home of others (50 percent versus 81 percent).

Although the FSP participation rate among elderly who live alone is higher than among elderly who live with others, the rate among the elderly who live alone (38 percent) is substantially lower than the rate among the total population of eligibles who live alone (45 percent), as shown in Tables III.2 and III.3. Allin and Martini examined which of the two effects--living alone or being elderly-- was the more important determinant of the low participation rate among elderly who live alone. When they separated the two effects, they found that living alone had the larger effect. But being elderly still had a large effect on the rate. Hence, persons who live alone have a low propensity to participate in the FSP, independent of whether they are elderly. To a lesser extent, persons who are elderly, independent of the number of persons with whom they live, have a low propensity to participate in the FSP.

Table III.4 presents household participation rates by selected demographic characteristics. These rates also show that households containing elderly or disabled persons are less likely to participate in the program than average. Only 35 percent of the eligible households that contained an elderly member participated, and 55 percent of the households that contained a disabled member participated. Among households with children, the participation rate was 71 percent, which is much higher than the overall household rate (56 percent). The participation rate among single male-headed food stamp households with children (56 percent) was considerably lower than the partici-

TABLE III.4

HOUSEHOLD PARTICIPATION RATES BY SELECTED
DEMOGRAPHIC CHARACTERISTICS: JANUARY 1988

Household Contains	Number of Participating Households (1,000)	Number of Eligible Households (1,000)	Household Participation Rate
Elderly Age 60 or Older	1,395	3,989	35.0%
Disabled under Age 60	625	1,132	55.2
Children under Age 18	4,215	5,909	71.3
Children Ages 5 to 17	3,225	4,719	68.3
Single Female Adult with Children	2,524	3,342	75.5
Single Male Adult with Children	120	216	55.8
Two or More Adults with Children[a]	1,570	2,351	66.8
White non-Hispanic Head	3,286	7,014	46.9
Black non-Hispanic Head	2,527	3,325	76.0
Hispanic Head	886	1,633	54.2
Total	6,882	12,292	56.0

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Counts of participants were distributed across subgroups of the population based on a sample of 11,012 food stamp case'records from the IQCS for January and February 1988. Estimates for eligibles were derived from tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

[a]Includes both households in which the gender of the household head is unknown and female-headed households that contain two or more adults.

pation rate among single female-headed and two-parent households with children (76 and 67 percent, respectively). However, it should be noted that the single male-headed rate is based on a relatively small sample.

Food stamp participation rates vary considerably by race and ethnicity. More than three-fourths of the eligible households headed by a black, non-Hispanic individual participated in the FSP in January 1988, compared with only 47 percent of the eligible households headed by a white, non-Hispanic individual. Hispanic households participated at a rate of 54 percent.

Allin and Martini's multivariate participation rates showed a much smaller gap (5 percentage points) between black and white households, and showed almost no gap between Hispanic and white households. Thus, holding other household characteristics (such as income) constant generates smaller differences in participation rates by race and ethnicity than are indicated in Table III.4.

Most of the benefit rates shown in Table III.5 are greater than the corresponding household rates in Table III.4, implying that, within most subgroups, households that are eligible for higher benefits (needier households) participate at higher rates than do households eligible for lower benefits (less needy households). The benefit rates were substantially higher than the household rates for the following groups:

- Households that contain an elderly member (5 percentage points higher than the household rate for the elderly)

- Households that contain two or more adults with children (9 percentage points higher than the corresponding household rate)

- Households headed by white non-Hispanics (13 percentage points higher than the corresponding household rate)

In addition to implying that the FSP is serving needier households, these differences in the benefit and household rates imply that benefit levels have a greater influence on the participation decisions of households that contain elderly members, two parents with children, and white non-Hispanic heads than they do on the decisions of other households.

TABLE III.5

BENEFIT RATES BY SELECTED DEMOGRAPHIC CHARACTERISTICS OF THE HOUSEHOLD: JANUARY 1988

Household Contains	Benefits Paid to Participating Households (1,000,000)	Potential Benefits for Eligible Households (1,000,000)	Benefit Rate
Elderly Age 60 or Older	$71.1	$177.7	40.0%
Disabled under Age 60	57.8	98.6	58.6
Children under Age 18	732.9	998.4	7 3 . 4
Children Ages 5 to 17	591.9	831.6	71.2
Single Female Adult with Children	402.6	556.9	72.3
Single Male Adult with Children	16.8	29.8	56.4
Two or More Adults with Children[a]	313.5	411.6	76.2
White non-Hispanic Head	393.4	656.8	59.9
Black non-Hispanic Head	338.7	412.1	82.2
Hispanic Head	131.4	220.0	59.7
Total	890.2	1,334.7	66.7

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Counts of participants were distributed across subgroups of the population based on a sample of 11,012 food stamp case records from the IQCS for January and February 1988. Estimates for eligibles were derived from tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

[a]Includes both households in which the gender of the household head is unknown and female-headed households that contain two or more adults. Benefit rates were almost identical to household rates for single female-headed and male-headed households.

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The benefit rate was lower than the household rate only for one group: households that contain a single female adult with children (3 percentage points lower). However, this finding is not unexpected, because the decision of many of these single-female-parent families to participate in the FSP may be made jointly with or secondarily to their decision to participate in the AFDC program. Hence, they would participate in the FSP regardless of their expected food stamp benefit. Moreover, households in which all members receive AFDC are automatically eligible for food stamps.

B.   PARTICIPATION RATES BY SELECTED ECONOMIC CHARACTERISTICS

Table III.6 presents household participation rates disaggregated by the level of potential benefits as a percentage of the maximum allotment. The estimates support research which shows that the decision to participate in the FSP is influenced by the level of benefits for which a household is eligible.[2] In January 1988, households eligible for the smallest benefits (benefits of between 1 percent and 25 percent of the maximum allotment) had the lowest participation rate (30 percent). In general, participation rates increased as potential benefits rose, reaching 91 percent for households eligible for benefits of 76 percent to 99 percent of the maximum. The exception to this pattern is a decline in the rate for households entitled to the maximum benefit allotment. This group of households eligible for the maximum benefit includes a large proportion of households with zero income--a group that may be subject to measurement or classification problems, as discussed below.

Table El.7 shows that eligible individuals in households whose income was below the poverty level participated in the program at much higher rates (72 percent) than did individuals who lived in households whose income was above the poverty level (19 percent). Similarly, 70 percent of households in poverty participated, receiving 72 percent of the benefits which would have been issued had all poor households participated (Tables III.8 and III.9).

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[2]Allin and Beebout (1989) review the research on the relationship between benefit levels and FSP participation.

TABLE III.6

HOUSEHOLD PARTICIPATION RATES BY MONTHLY BENEFITS
AS A PERCENTAGE OF THE MAXIMUM FSP ALLOTMENT:
JANUARY 1988

Monthly Benefit Level as a Percentage of Maximum Allotment	Number of Participating Households (1,000)	Number of Eligible Households (1,000)	Household Participation Rate
1-25%	993	3,324	29.9%
26-50	1,355	2,203	61.5
51-75	1,808	2,63 1	68.7
76-99	1,436	1,578	91.0
100	1,290	2,555	50.5
Total	6,882	12,292	56.0

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Counts of participants were distributed across subgroups of the population based on a sample of 11,012 food stamp case records from the IQCS for January and February 1988. Estimates for eligibles were derived from tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

TABLE III.7

INDIVIDUAL PARTICIPATION RATES BY THE
RATIO OF THE GROSS INCOME OF THE INDIVIDUAL'S FOOD
STAMP UNIT TO THE MONTHLY FEDERAL POVERTY LEVEL:
JANUARY 1988

Income as a Percentage of Poverty	Number of Participating Individuals (1,000)	Number of Eligible Individuals (1,000)	Individual Participation Rate
Total ≤ 100	16,843	23,510	71.6%
0	1,007	1,418	71.0
1-50	6,110	7,891	77.4
51-100	9,725	14,201	68.5
> 100	1,443	7,463	19.3
Total	18,286	30,973	59.0

SOURCES: Counts for participants were derived from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Counts of participants were distributed across subgroups of the population based on a sample of 11,012 food stamp case records from the IQCS for January and February 1988. Estimates for eligibles were derived from tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

TABLE III.8

HOUSEHOLD PARTICIPATION RATES BY THE RATIO OF THE
GROSS INCOME OF THE FOOD STAMP UNIT TO THE MONTHLY
FEDERAL POVERTY LEVEL: JANUARY 1988

Income as a Percentage of Poverty	Number of Participating Households (1,000)	Number of Eligible Households (1,000)	Household Participation Rate
Total ≤ 100	6,333	9,022	70.2%
0	477	682	70.0
1-50	2,020	2,574	78.5
51-100	3,836	5,766	66.5
Total > 100	549	3,270	16.8
Total	6,882	12,292	56.0

SOURCES: Counts for participants were derived from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Counts of participants were distributed across subgroups of the population based on a sample of 11,012 food stamp case records from the IQCS for January and February 1988. Estimates for eligibles were derived from tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

TABLE III.9

BENEFIT RATES BY THE RATIO OF THE GROSS INCOME OF THE
FOOD STAMP UNIT TO THE MONTHLY FEDERAL POVERTY LEVEL:
JANUARY 1988

Income as a Percentage of Poverty	Benefits Paid to Participating Households (1,000,000)	Potential Benefits for Eligible Households (1,000,000)	Benefit Rate
Total $\leq$ 100	$864.3	$1,205.7	71.7%
0	78.6	109.3	72.0
1-50	400.1	514.1	77.8
51-100	385.6	582.3	66.2
Total $>$ 100	25.9	129.1	20.0
Total	890.2	1,334.8	66.7

SOURCES: Counts for participants were derived from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Counts of participants were distriiuted across subgroups of the population based on a sample of 11,012 food stamp case records from the IQCS for January and February 1988. Estimates for eligibles were derived from tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis tile contains a total of 18,870 households and 2,431 households eligible for food stamps.

All three rates (individuals, households, and benefits) were 77 to 79 percent for households whose income was between 1 and **50** percent of the poverty level, and declined rapidly as income increased, reaching a low of 17 to 20 percent among households whose incomes were above the poverty level. Households and persons in the highest-income class were eligible only for small amounts of assistance; thus, their low participation rate is not surprising. Persons in eligible households whose incomes were above the poverty level were eligible for $17 on average in January 1988, while persons in households whose incomes were below the poverty level were eligible for $51 on average. Studies of participation rates in other programs, such as SSI, have also found that participation rates decline as family income increases. For example, Shiels et al. (1990) found that based on 1985 SIPP, the rate of participation among elderly persons eligible for SSI declined to a low of about 26 percent for those whose monthly countable income was $500 or more.

Individuals in eligible households that did not receive cash income participated at a rate of 71 percent. Similarly, households that did not receive any income participated at a rate of 70 percent, and their benefit rate was 72 percent.

A priori, one would expect that households that do not receive any income would participate at the highest rates. Table III.8 shows that participation among the zero-income households is 9 percentage points lower than the rate among households whose income is between 1 and **50** percent of the poverty level (but 14 percentage points higher than the average rate). Studies based on other surveys have also found unusually low rates among zero-income households. For example, Czajka **(1981),** using the 1979 Income Survey Development Program (ISDP), found that the univariate participation rate among zero-income households was 38 percentage points lower than the rate among households whose income was 1 to 50 percent of the poverty level (and 26 points lower than the average rate).

Allin and Martini's findings exhibited the same pattern. Using 1985 SIPP, **Allin** and Martini found that the univariate participation rate among zero-income households was 43 percentage points

below the rate among households whose income was between 1 and 50 percent of the poverty level (and 19 percentage points below the average). When they controlled for the effects of other characteristics, they found the same but less extreme pattern. The rate for zero-income households was 18 percentage points below the rate among households whose income was between 1 and 50 percent of the poverty level (and 4 percentage points below the average). Because no household can exist on zero income for a long period of time, and since studies have shown that measurement problems are prevalent in the zero-income group, the eligible units with zero income probably include households that are subject to some form of reporting or measurement error.[3] Hence, the zero-income households are overrepresented, which biases the participation rate estimates downward. Another reason that participation rates are unusually low among this group is that some households may have zero income for a very short period of time (one or two months). During a short period of economic distress, households may be less likely to seek benefits because they may be able to draw on savings or receive help from friends or relatives.

Table III.10 presents household participation rates among those with earnings, SSI, public assistance, and unemployment compensation. The estimated participation rate for households with earnings is much lower than the overall rate (34 percent versus 56 percent). Recipients of unemployment compensation also participated at a lower rate (46 percent) than the total eligible population.

However, because the sample size for eligible households with unemployment compensation was small, the statistical reliability of these estimates is low.

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[3]Selected studies have shown that households classified as zero income often represent measurement or classification problems rather than households with no source of economic support, and that is why they do not seem to behave in the expected manner. In a case-by-case study of families with annual reported income below $500 in the March 1972 CPS, Burns (1974) found that although most had low incomes, approximately 70 percent represented some type of conceptual or measurement problem. For example, approximately 28 percent of the families or individuals represented special living arrangements, support for which was provided from outside the: household or payment in kind. In another study using matched CPS and Internal Revenue Service (IRS) tax data, the families with zero CPS wage or salary income had reported an average income of $3,911 to the IRS (Her-riot and Spiers, 1975).

TABLE III.10

HOUSEHOLD PARTICIPATION RATES BY SELECTED
SOURCES OF INCOME: JANUARY 1988

Source of Income	Number of Participating Households (1,000)	Number of Eligible Households (1,000)	Household Participation Rate
Earned Income	1,419	4,182	33.9%
SSI	1,431	1,910	75.0
Elderly in the unit	836	1,188	70.3
No elderly in the unit	596	722	82.6
Public Assistance[a]	3,448	3,120	110.5
AFDC	2,710	2,408	112.5
Other welfare	777	786	98.9
Unemployment Compensation	158	340	46.4
Total	6,882	12,292	56.0

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Counts of participants were distributed across subgroups of the population based on a sample of 11,012 food stamp case records from the IQCS for January and February 1988. Estimates for eligibles were derived from tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

[a]Public assistance refers to Aid to Families with Dependent Children (AFDC), General Assistance (GA), and local means-tested programs, such as Emergency Assistance.

The household participation rate for food stamp households that received SSI payments-75 percent--exceeded the overall participation rate by 19 percentage points. Households in both the numerator and the denominator of this participation rate exclude persons who receive SSI in cashout states, in which cash is issued through the SSI program in lieu of food stamps.

Households that received SSI income and contained elderly persons participated in the FSP at a much higher rate--70 percent--than all households with elderly (35 percent, from Table 4).[4] The higher FSP participation rate for SSI households that contain elderly persons may be due to the low participation rate of those who were not poor enough to qualify for SSI. Such individuals are also entitled to small food stamp benefits.

The estimates for households that receive public assistance, especially those that receive AFDC, exceeded 100 percent. These unrealistic rates are due primarily to the underreporting of AFDC receipt in SIPP (the number of AFDC recipients in SIPP was only 82 percent of an independent estimate derived from administrative data), as discussed in the Appendix.

Nonetheless, other multivariate analyses have found a strong positive relationship between participation in the FSP and participation in public assistance programs (see Allin and Martini, forthcoming; and Allin and Beebout, 1989). For example, Allin and Martini found that households that receive public assistance are almost three times more likely to participate in the FSP than households that do not.

C.   THE CHARACTERISTICS OF ELIGIBLE NONPARTICIPANTS

The preceding sections focused on households that participated in the Food Stamp Program. This section focuses on households that were eligible for the FSP but did not participate.

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[4]Shiels et al. (1990) estimated that the rate of SSI participation by elderly individuals eligible for the SSI program was 61 percent, based on 1985 SIPP data on eligibles and program data on the number of participants. This rate is considerably higher than the rate of FSP participation by elderly individuals eligible for food stamps (34 percent, from Table 3).

In January 1988, about 5.4 million of the 12.3 million households eligible for the FSP were not participating (see Table 111.11). These households tended to have relatively high incomes and were entitled to relatively small benefits. Among all eligible nonparticipating households--

*   About half had incomes above the poverty level.

- 43 percent were eligible for a relatively small monthly benefit--l percent to 25 percent of the maximum ($20 on average).

As shown earlier in this paper and in other research (Doyle, 1990; and Allin and Martini, forthcoming), those who are eligible for lower benefits tend to participate in the FSP at lower-than-average rates; thus, these results are not surprising. These characteristics of nonparticipating eligibles also serve as further evidence that the program is targeted effectively at those whose need is comparatively greater.

Most nonparticipating households contained either an elderly member (two-thirds of whom lived alone) or a working member (most of whom had children). These characteristics also are consistent with the findings in this paper that participation among households with elderly (35 percent) and earners (34 percent) is below average. Although a relatively large proportion of eligible nonparticipants had income above the poverty level, about half had income below the poverty line, and about half of those were eligible to receive the maximum allotment. Overall, about a quarter of all nonparticipants were eligible for the maximum monthly benefit. Table III.12 shows the characteristics of those nonparticipating households in poverty eligible for the maximum benefit. Most of these nonparticipating poor households were nonelderly households without earnings (53 percent), and most of these were without children (30 percent of 53 percent). Most of these nonparticipants were single nonelderly persons who tend to have very low participation rates.

Table III.13 shows the overall demographic and economic characteristics of eligible nonparticipating households. Overall, almost half of the eligible nonparticipating households

TABLE III.11

CHARACTERISTICS OF ELIGIBLE NONPARTICIPATING HOUSEHOLDS
ABOVE AND BELOW POVERTY: January 1988

	Percent Distribution of Eligible Nonparticipating Households[a]		
	Below Poverty	Above Poverty	Total
Benefit Level as a Percentage of Maximum Allotment			
1-25%	7.2%	35.9%	43.1%
26-50	6.3	3.2	15.7
51-75	12.0	0.9	15.2
76-99	1.7	---	2.6
100	22.6	0.8	23.4
Total	49.7	50.3	100.0
Composition			
Elderly present:	21.4	26.6	48.0
Living alone	12.4	17.3	29.6
Living with others	9.0	9.3	18.3
Nonelderly households with earnings:	25.0	20.3	45.3
With children	16.3	15.0	31.2
Without children	8.8	5.3	14.1
Other	3.3	3.4	6.7
Total	49.7	50.3	100.0
Eligible Nonparticipating:			
Persons (thousands)	6,667	6,020	12,687
Households (thousands)	2,689	2,721	5,410
Benefits (millions)	$341	$103	$445

SOURCE: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Counts of participants were distributed across subgroups of the population based on a sample of 11,012 food stamp case records from the IQCS for January and February 1988. Estimates for eligibles were derived from tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

NOTE: Eligible nonparticipants are computed as the difference between eligibles and participants.

[a]Percents may not sum to 100 due to rounding error.

TABLE III.12

THE CHARACTERISTICS OF ELIGIBLE NONPARTICIPATING
HOUSEHOLDS BELOW POVERTY THAT ARE ELIGIBLE FOR
THE MAXIMUM FOOD STAMP BENEFIT: JANUARY 1988

	Eligible Nonparticipating Households Below Poverty that are Eligible for Maximum FSP Benefit	
	Ponulation (1,000)	Distribution of Households
Composition		
Elderly present:	366.3	30.0
Living alone	268.8	22.0
Living with others	97.5	8.0
Nonelderly households with earnings:	210.5	17.2
With children	61.3	5.0
Without children	149.3	12.2
Nonelderly households without earnings	644.3	52.8
With children	277.5	22.7
Without children	366.8	30.0
Income as a Percentage of Poverty[a]		
0	204.7	16.8
1-50	649.3	53.2
51-100	367.2	30.1
Total Households	1,221.2	100.0

SOURCE   Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Counts of participants were distriiuted across subgroups of the population based on a sample of 11,012 food stamp case records from the IQCS for January and February 1988. Estimates for eligibles were derived from tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

NOTE: Eligible nonparticipants are computed as the difference between eligibles and participants.

[a]Percents may not sum to totals due to rounding error.

TABLE III.13

DEMOGRAPHIC AND ECONOMIC CHARACI'ERISTICS OF ELIGIBLE
NONPARTICIPATING HOUSEHOLDS: January 1988

	Population (1,000)	Distribution of Households
Household Size[a]		
1	2,679	49.5%
2	943	17.4
3	622	11.5
4	494	9.1
5	289	5.3
6+	384	7.1
Household Contains:[b]		
Elderly	2,594	48.0
Elderly living alone	1,603	29.6
Disabled	507	9.4
Disabled under age 60	112	2.1
Children under age 18	1,693	31.3
Children ages 5 to 17	1,494	27.6
Single female with children	817	15.1
Single male with children	95	1.8
Two or more adults with children	781	14.4
Single nonelderly and nondisabled adult	438	8.1
White non-Hispanic head	3,727	68.9
Black non-Hispanic head	798	14.8
Hispanic head	748	13.8
Income as a Percentage of Poverty[a]		
Total ≤ 100%	2,689	49.7
0	205	3.8
1-50	554	10.2
51-100	1,930	35.7
Total > 100%	2,721	50.3.
Household Income Includes:[b]		
Earnings	2,763	51.1
SSI	478	8.8
Unemployment compensation	182	3.4
Total Households	5,410	100.0

SOURCE: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Counts of participants were distributed across subgroups of the population based on a sample of 11,012 food stamp case records from the IQCS for January and February 1988. Estimates for eligibles were derived from tabulations prepared with the January 188 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

NOTE: Eligible nonparticipants are computed as the difference between eligibles and participants.

[a]Percents may not sum to totals due to rounding error.

[b]Percents do not sum to 100 because households may exhibit more than one of the characteristics listed. Note that the elderly and the disabled categories are not mutually exclusive.

consisted of a single adult, just under one-third contained children, and over two-thirds were headed by a white non-Hispanic individual. The eligible nonparticipating households with children (31 percent) were almost evenly divided into those headed by a single female (15 of 31 percent) and those headed by two or more adults (14 of 31 percent). Only 2 percent of the eligible nonparticipating households with children were headed by a single male.

Only 4 percent of the eligible nonparticipating households reportedly had no income, and may have been subject to some form of measurement error. Very few received unemployment compensation (relatively few eligible households receive this source of income), while 9 percent received SSI.

IV. COMPARISONS OF AUGUST 1985 AND JANUARY 1988 PARTICIPATION RATES

Those interested in FSP policy often wish to know whether participation rates have changed over time. This chapter compares the participation rates in August 1985 as derived by Doyle (1990) with the participation rates in January 1988, as derived in this report. Because the same procedures were used to estimate the 1985 and 1988 participation rates, the rates are directly comparable.

Fluctuations in participation rates can be caused by changes in FSP legislation, the economy, or other programs--changes that affect the size and demographic characteristics of the eligible and participating population. For example, changes in FSP legislation that expand eligibility requirements may increase the number of eligibles immediately as more persons meet the financial eligibility criteria. The number of participants may also increase, but only to the extent that potential new recipients learn about the changes and decide to apply for food stamps. Changes in the economy can also affect the participation rate. For example, a recovering economy may reduce the number of eligibles as persons obtain jobs or increase their purchasing power. The number of participants may also decline, but because the participation rate among those who lose their eligibility in a recovering economy tends to be low (they tend to be at the margin of financial eligibility) the decline in the number of participants is usually less than the decline in the number of eligibles. Finally, since most food stamp recipients participate in other social welfare programs, changes in the eligibility requirements or benefit levels of other programs can also affect FSP participation rates.

Between 1985 and 1988, Congress passed several pieces of legislation that contained provisions to expand the size of the eligible population. The Food Security Act (FSA) of 1985, implemented in May 1986, was the most major of the legislative changes that expanded eligibility under the FSP. In addition to the 1985 FSA, the 1987 Stewart B. Mckinney Homeless Assistance Act (PL 100-77), the 1988 Hunger Prevention Act (PL 100-435), and the 1990 FACT legislated smaller expansions in

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eligibility and benefit levels and facilitated application **procedures.**[1] **In** addition to legislative changes between 1985 and 1988, the national economy was recovering from the recession of the early **1980s,** and Medicaid began expansions whose likely effect was to increase participation in the **FSP.**

This chapter shows that participation rates declined slightly between 1985 and 1988 due to the lack of an immediate response to the more generous eligibility criteria introduced under the 1985 Food Security Act. Below, we examine the overall change in participation rates between August 1985 and January 1988, and examine the major reasons for the change. We then discuss the characteristics of those newly eligible that caused the change in participation rates, and examine the change in participation rates among demographic and economic subgroups of the eligible population. Finally, we examine changes in the characteristics of program eligibles who did not participate in the program and summarize the chapter.

A.   CHANGES **IN** AGGREGATE PARTICIPATION RATES BETWEEN 1985 AND 1988

T   h   e   total number of number of participants remained relatively constant, thus lowering participation rates (Table **IV.1).** The number of eligible persons increased from 28.9 million to 31.0 million (by 7 percent) while the number of participants declined slightly, from 18.6 million to 18.3 million (by about 1 percent). Similarly, the number of eligible households increased by 6 percent while the number of participating households changed by less than 1 percent. Finally, benefits that would have been issued had participation among the eligibles been **100** percent increased by 24 percent, while the benefits actually received by participants increased by 10 percent. The increase in the total number of eligibles combined with the very slight change in the total number of participants lowered the participation rate between 1985 and 1988 from 64.3 percent to 59.0 percent for individuals, from 59.4 percent to 56.0 percent for households, and from 75.3 percent to 66.7 percent for total potential benefits.

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[1]**Of** the three additional legislative changes, only the 1987 Stewart B. **McKinney** Homeless Assistance Act was implemented between August 1985 and January 1988, and it affected a relatively small group of households.

TABLE IV.1

COMPARISON OF PARTICIPATION RATES BETWEEN 1985 AND 1988,
REFLECTING THE IMPACT OF THE 1985 FOOD SECURITY ACT

	August 1985 (Actual)			January 1988 (Pre-FSA)			January 1988 (Actual)			January 1988 Implicit Participation Rate Among Newly Eligible
	Participants (1.000)	Eligibles (1.000)	Participation Rate	Participants (1.000)	Eligibles (1,000)	Participation Rate	Participants (1,000)	Eligibles (1,000)	Participation Rate	Participation Rate
Individuals	18,560	28,884	64.3%	18,158	29,039	625%	18,286	30,973	59.0%	6.6%
Households	6,894	11,604	59.4	6,829	11,426	59.8	6,882	12292	56.0	6.1
Benefits	$807,265	$1,072,262	75.3	$878,477	$1,241,738	70.7	$890,158	$1,334,779	66.7	6.9[a]

SOURCE: January 1988 counts for participants are from the Food Stamp Program Statistical **Summary of Operations, adjusted for benefits issued** in error. Estimates for eligibles were derived from tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps. August 1985 values and rates were derived from Table 1 of Doyle (1990).

NOTE The implicit participation rate among the newly eligible persons and households under the FSA was computed as the ratio of the newly participating in January 1988 to the newly eligible in January 1988. Newly eligible persons and households were computed as the difference between the number of actual and pre-FSA eligibles in January 1988. Similarly, newly participating persons and households were computed as the difference between the number of actual and pre-FSA participants in January 1988.

[a]The benefit participation rate among newly eligible householdswas computed as the ratio of benefits issued to newly participating households in January 1988 **($4,629,000),** to potential benefits issued to newly eligible households in January 1988 **($67,479,033).** Estimates of benefits to newly participating and newly eligible households were derived from special tabulations from the Winter IQCS file and the January 1988 SIPP analysis tile.

1. Major Reasons for the Shift in FSP Participation Rates between 1985 and 1988

The major reason for the downward shift in participation rates between 1985 and 1988 was a lack of participation among those who were made eligible by the more generous eligibility criteria introduced under the 1985 Food Security Act. Among numerous other changes, the 1985 FSA--

- Granted automatic eligibility to households in which all members receive AFDC or SSI

- Separated the shelter and child care deduction limits

- Increased the asset limit for households that do not contain elderly members (from $1,500 to $2,000)

- Raised the asset limit for households in which elderly were living alone (from $1,500 to $3,000)[2]

- Raised the earnings deduction rate (from 18 percent to 20 percent)

To examine the influence of the 1985 FSA on the January 1988 participation rates, we simulated the number of eligibles and participants in 1988 in the absence of the FSA eligibility changes and compared the results with the number of actual eligibles and participants (the Appendix provides details on the methodology). That is, we asked, "What would the participation rates be in January 1988 if the pre-FSA rules were still in effect?" We also asked, "What is the participation rate among those who became eligible under the FSA?"

The results showed that low participation rates among those made eligible by the FSA accounts for almost all of the decline in participation rates among persons and households. As shown in Table IV.l, participation rates in January 1988 would have been almost the same as the August 1985 rates had the pre-FSA rules remained in effect. The January 1988 household participation rate would have been 59.8 percent in the absence of the FSA (compared with 59.4 percent in August 1985), and the January 1988 person participation rate would have been 62.5 percent (compared with 64.3 percent

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[2]Formerly, only households that contained elderly members *and* two or more persons could qualify for the higher limit.

in 1985). As also shown in Table IV.l, the more generous eligibility criteria increased the number of eligible households by 866,000, or almost 8 percent, but increased the number of participating households only by 53,000 or less than 1 percent. Hence, the participation rate among newly eligible households was very low--only 6 percent, compared with a participation rate of 56 percent among all eligible households. We found similarly low participation rates among newly eligible individuals (7 percent) and potential benefits (7 percent). Thus, the FSA legislation expanded eligibility for the FSP, but most of those who became eligible did not participate, generating an overall decline in participation rates.

2. Other Influences on FSP Participation Rates

Although the 1985 FSA was the major influence on the change in participation rates between 1985 and 1988, changes in the economy and changes in other social programs may have also influenced the rates. Between August 1985 and January 1988, the national economy was recovering from the recession of the early 1980s. The seasonally adjusted national unemployment rate declined steadily during this period, from 7.1 percent in August 1985 to 5.8 percent in January 1988. Similarly, the poverty rate declined from 14.0 percent in 1985 to 13.1 percent in 1988. However, other measures paint a less rosy picture of the economy, at least in some areas of the country. For example, most of the New England states felt the effects of a recession as early as FY88. A rise in unemployment in these states was offset by a decline in unemployment in most other states, resulting in an overall decline. Moreover, prices were rising nationwide between 1985 and 1988. In particular, prices for food-at-home rose by 17 percent between 1985 and 1988.[3] Hence, although the traditional national measures of the economy indicate a recovery during this period, the economic status of many low-income households may have declined between 1985 and 1988. Hence, the overall impact of the economy on the participation rates is not clear.

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[3]Price increases are based on the change in the annual Consumer Price Index for Urban Consumers (CPI-U) for all items and for food at home from the April 1986 and the April 1989 Monthly Labor Review.

Expansions in the Medicaid program may have also influenced the change in FSP participation rates. Medicaid expansions during the late 1980s increased the number of Medicaid recipients and encouraged Medicaid recipients to join the FSP. McConnell (forthcoming) estimated that the number of Medicaid-recipient households that entered the FSP increased by about 56 percent between N87 and FY90. The increase in Medicaid recipients who joined the FSP may have dampened the observed decline in the participation rate.

3. **Changes in FSP Participation Since 1988**

While data on the change in the number of eligibles since 1988 are not yet available, FSP caseload data show that the number of participants began to increase in the third quarter of fiscal year 1989 (FY89.3). Between N89.2 and FY90.2, participation in the FSP increased by over 1 million persons (over 5 percent), reaching 20 million in March 1990 for the first time since early 1985. FSP participation has increased even more rapidly since FY90.2, reaching 25 million in December 1991. Corson and McConnell (1990) and McConnell (forthcoming) analyzed the reasons behind the increase in FSP participation between N89.2 and FY90.2 and found that, while no one factor could have been the sole determinant of the increase, two factors explain a large proportion of the total increase. First, changes in the Medicaid program brought more persons into the Medicaid program and encouraged Medicaid recipients to join the FSP. Second, increases in the unemployment rate and the number of working poor in certain areas of the country increased participation in those areas (such as the Middle Atlantic and New England states). If forthcoming data show that the subsequent increase in the number of eligibles is less than the observed increase in the number of participants since 1988, then the participation rate will rise.

B. **IMPACT OF THE FSA ON DISAGGREGATED PARTICIPATION RATES**

As stated earlier, the minimal response to the more generous eligibility criteria of the 1985 FSA lowered overall participation rates. In this section, we discuss the impact of the FSA on participation

rates among subgroups of the eligible population. First, we describe which subgroups of the eligible population in 1988 were affected to the greatest extent by the provisions of the **FSA**. Second, we discuss the resulting impact of the FSA on disaggregated participation rates, comparing the rates across the demographic and economic characteristics of the eligible population between August 1985 and January 1988. Finally, we describe the change in the distribution of the eligible nonparticipating population between 1985 and 1988.

1. Subgroups of the Eligible Population Affected to the Greatest Extent by The FSA

Of the five major provisions of the FSA listed in Section Al, the two provisions that raised the asset limits affected the greatest number of households and thus had the greatest impact on participation rates. Appendix Table **A.2** shows that 48 percent of the newly eligible households were made eligible by the increase in the asset limit on nonelderly households **from** $1,500 to $2,000, and **37** percent were made eligible by the increase in the asset limit on single elderly households **from** $1,500 to $3,000. Hence, almost 90 percent of the newly eligible households were made eligible by the higher asset provisions. Appendix Table A2 also shows that 30 percent of the newly eligible households were made eligible by the automatic eligibility criterion for households in which all members receive AFDC or **SSI**.[4] Only 4 percent were made eligible by the higher earnings deduction.'

The characteristics of the newly eligible households reflect those households on which the FSA had the greatest impact. As shown in Table **IV.2, 40** percent of newly eligible households are elderly who live alone (compared with 21 percent among all eligible households). Elderly who live with others account only for 9 percent of the newly eligible population. Households that contain nonelderly members represent a smaller group among the newly eligible (51 percent) than among all

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[4]**As** discussed in the Appendix the simulation probably overestimates the impact of the automatic eligibility   provision.

'Households could have been made eligible by more than one provision. Hence, the sum of the impact of individual provisions is greater than the total impact.

TABLE Iv.2

CHARACTERISTICS OF HOUSEHOLDS BECOMING NEWLY
SECURITY ACT

Households with:	January 1988 Total Eligible Households		January 1988 Newly Eligible Households		Participation Rate Among January 1988 Newly Eligible Households
	Number (1,000)	Percent	Number (1,000)	Percent	Percent
Elderly	3,989	326%	428	49.4%	55%
Living alone	2,626	21.4	348	40.2	5.5
Living with others	1,363	11.2	80	9.3	5.8
Receiving public assistance	182	1.5	20	23	7.2
Nonelderly	8,302	67.4	438	50.6	4.7
With children	5,676	46.2	283	327	6.7
Receiving public assistance	2,938	24.0	155	12.3	10.3
With earnings	3,814	31.0	244	28.2	7.6
Single person	4,867	48.4	468	54.0	4.7
Income above poverty level	3,270	26.1	452	52.2	8.5
Income below poverty level	9,022	13.9	414	47.8	3.4
Total	12,292	100.0	866	100.0	6.1

SOURCE: January 1988 estimates for eligibles were derived from tabulations prepared with the January 1988 analysis tile developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

NOTE: The participation rate among the newly eligible households under the FSA was computed as the ratio of the newly participating and their benefits in January 1988 to the newly eligible and their benefits in January 1988. Newly eligible households were computed as the diierencc between the number of actual and pre-FSA eligibles in January 1988. Newly participating households were computed as the difference between the number of actual and pre-FSA participants in January 1988.

eligibles (67 percent). However, among newly eligible households that contain nonelderly members, most have children (33 percent of 51 percent) and receive earnings (28 percent of 51 percent), but do not receive public assistance (12 percent of 52 percent receive public assistance).

FSA

FSAcipation rates. Below, we discuss the impact of the

percentage change in participation rates between 1985 and 1988 (1) due to the provisions of the **FSA,** and (2) in the absence o**FSA**he provisions of the

In the absence of the **FSA, FSP** participation rates among many subgroups would have increased between 1985 and 1988, as shown in the last column in Table IV.3. For example, participation rates

TABLE IV.3

COMPARISON OF HOUSEHOLD PARTICIPATION RATES BY SELECTED
DEMOGRAPHIC CHARACTERISTICS: AUGUST 1985 AND JANUARY 1988

| Demographic Characteristic | August 1985 (Actual) | January 1988 (Pre-FSA) | January 1988 (Actual) | Percent Change in Participation Rates | | |
				Overall	Percent Change Due to FSA	Percent Change in the Absence of FSA
Household Contains:						
Elderly Age 60 or Older	37.3%	38.5%	35.0%	-6.2%	-9.1%	3.2%
Disabled under Age 60	46.7	61.1	55.2	18.2	-9.7	30.8
Children under Age 18	73.9	74.9	71.3	-3.5	-4.8	1.4
Single Person	49.8	49.2	45.0	-9.6	-8.5	-1.2
Single Female Adult with Children	74.8	77.5	75.5	1.0	-2.6	3.6
Single Male Adult with Children	45.9	62.8	55.8	21.6	-11.1	36.8
Two or More Adults with Children[a]	75.3	72.1	66.8	-11.3	-7.4	-4.2
White non-Hispanic Head	48.9	51.5	46.9	-4.1	-8.9	5.3
Black non-Hispanic Head	77.1	77.8	76.0	-1.4	-23	0.9
Hispanic Head	54.8	55.4	54.2	-1.1	-22	1.1
Total	59.4	59.8	56.0	-5.7	-6.4	0.7

SOURCES: January 1988 rates were derived from Table 4 of this report. August 1985 rates were derived from Table 2 and Table 4 of Doyle (1990).

NOTE: The percent change in participation rates due to the FSA is the percent change between pre-FSA rates and actual rates in January 1988. The percent change in participation rates in the absence of the FSA is the percent change between actual rates in 1985 and pre-FSA rates in 1988.

[a]Includes both households in which the gender of the household head is unknown and female-headed households that contain two or more adults.

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TABLE IV.4

COMPARISON OF HOUSEHOLD PARTICIPATION RATES
BY SELECTED ECONOMIC CHARACTERISTICS:
AUGUST 1985 AND JANUARY 1988

Economic Characteristic	August 1985 (Actual)	January 1988 (Pre-FSA)	January 1988 (Actual)	Percent Change in Participation Rates		
				Overall	Percent Change Due to FSA	Percent Change in the Absence of FSA
Monthly Benefit Level As A Percent of Maximum Allotment						
1-25%	30.0%	321%	29.9%	-0.3%	-6.9%	7.0
26-50%	58.3	62.8	61.5	5.5	-2.1	7.7
51-75%	86.0	77.0	68.7	-20.1	-10.8	-10.5
76-99%	89.1	97.0	91.0	2.1	-6.2	8.9
100%	64.3	53.0	50.5	-21.5	-4.7	-17.6
Income as a Percentage of Poverty						
Total ≤ 100%	74.6	73.4	70.2	-5.9	-4.4	-1.6
0	69.0	73.1	70.0	-1.4	-4.2	5.9
1-50	927	81.9	78.5	-15.3	-4.2	-11.7
51-100	7.2	69.6	66.5	-1.0	-4.5	3.6
Total > loo	14.8	18.1	16.8	13.5	-7.2	22.3
Source of Income						
Earned income	36.8	35.7	33.9	-7.9	-5.0	-3.0
SSI:	65.7	82.2	75.0	14.2	-8.8	25.1
Elderly in the unit	66.6	77.9	70.3	5.6	-9.8	17.0
No elderly in the unit	64.1	89.4	826	28.9	-7.6	39.5
Public assistance:	115.5	114.7	110.5	-4.3	-3.7	-0.7
AFDC	118.5	117.6	1125	-5.0	-4.3	-0.8
Other welfare	97.4	101.0	98.9	1.5	-21	3.7
Unemployment compensation	75.6	52.2	46.4	-38.6	-11.1	-31.0
Total	59.4	59.8	56.0	-5.7	-6.4	0.7

SOURCES: January 1988 rates were derived from Table 4 of this report. August 1985 rates were derived from Table 2 and Table 4 of Doyle (1990).

NOTE: The percent change in participation rates due to the *FSA is* the percent change between pre-FSA rates and actual rates in January 1988. The percent change in participation rates *in the absence of the FSA* is the percent change between actual rates in 1985 and pre-FSA rates in 1988.

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among households that contain elderly members and households that contain children would have increased (by 3 percent and 1 percent, respectively) in the absence of the FSA instead of decreasing (by 6 percent and 4 percent). In other words, the more generous provisions of the FSA were responsible for all of the decline in participation rates among households that contain elderly or children. Similarly, almost all of the decline in the participation rates of single-person households can be attributed to the FSA, which increased the number of eligible single persons whose assets were high and participation rates were low. In the absence of the FSA, the participation rate among single-person households would have declined only about 1 percent, instead of almost 9 percent. Participation rates among other subgroups increased between 1985 and 1988 despite the more generous provisions of the FSA. For example, participation rates among households that contain disabled persons (under age 60) increased by 18 percent overall. In the absence of the FSA, the rates would have increased even more. Similarly, the participation rates of households comprised of single male adults with children were higher in 1988 than in 1985, but the participation rate would have been even higher in the absence of the FSA (however, because the sample size of this latter group was very small, the results should be viewed with caution)_

Table IV.4 shows that the FSA also had a large influence on participation rates according to the economic characteristics of eligible households. For example, in the absence of the FSA, participation rates for households that receive small benefits (1 to 25 percent of the maximum allotment) would have increased by 7 percent (rather than not changing at all). For households that receive large benefits (between 76 and 99 percent of the maximum allotment), participation rates would have increased by 9 percent in the absence of the FSA (rather than by only 2 percent). However, for households that receive between 51 and 75 percent of the maximum allotment, and for those at the maximum allotment, participation rates would have declined anyway, due to other factors. These factors may have included a worsening economy (and lower incomes) for some low-income households, despite an improving economy overall, as discussed earlier.

The provisions of the FSA accounted for most of the decline in participation rates among households whose income was less than the poverty level. In the absence of the FSA, participation rates among households in poverty would have declined by less than 2 percent (rather than by 6 percent). The participation rates of households whose income was greater than the poverty level increased, but would have increased even more in the absence of the FSA. Among households with earnings and households with public assistance, most of the decline in rates is due to the **FSA.** Participation rates among households with earnings would have declined only by 3 percent (rather than by 8 percent), and the rates for households that receive public assistance would have changed by less than 1 percent in the absence of the **FSA.** Participation rates among SSI households would have increased to an even greater extent in the absence of the **FSA.** Finally, the large decline in the participation rates of households that received unemployment compensation, was largely due to factors other than the **FSA,** but because the sample size of this group is very small the results must be viewed with caution. Overall, participation rates would have remained about the same (at about 60 percent) had the FSA not been passed, and the rates among most groups would have increased or changed very little in the absence of the FSA

3. **Change in the Distribution of Eligible Nonparticipating Households between 1985 and 1988**

As shown in Table **IV.5,** the distribution of eligible households that did not participate in the FSP did not change much between 1985 and 1988. As in 1985, a relatively large proportion of eligible households that did not participate in 1988 contained elderly persons (48 percent), had high incomes (50 percent), or were eligible for small benefits (43 percent).

The distribution of *newly eligible* nonparticipating households is also similar to the distribution of total eligible nonparticipating households in both 1985 and 1988. However, several groups of newly eligible households in 1988 show a slightly higher proportion of nonparticipants, reflecting the types of groups that were affected to the greatest extent by the FSA For example, the proportion of nonparticipating newly eligible households that contained elderly persons who lived alone is about

TABLE IV.5

COMPARISON OF THE DEMOGRAPHIC AND ECONOMIC
CHARACTERISTICS OF ELIGIBLE NONPARTICIPATING HOUSEHOLDS:
AUGUST 1985 AND JANUARY 1988

	Percent Distribution of Eligible Nonparticipating Households		
	August 1985	January 1988	January 1988 Newly Eligible
Household Contains[b]			
Elderly	52.7%	48.0%	49.7%
Elderly living alone	32.4	29.6	40.4
Disabled	11.5	9.4	14.1
Disabled living alone	3.7	2.1	4.8
Children under age 18	30.5	31.3	35.7
Single person	49.6	49.5	54.8
Single female with children	17.1	15.1	10.8
Single male with children	2.4	1.8	3.0
Two or more adults with children	11.0	14.4	22.0
White non-Hispanic head	73.2	68.9	83.4
Black non-Hispanic head	15.8	14.8	9.7
Hispanic head	12.4	13.8	4.7
Income as a Percent of Poverty			
Total < 100%	44.5	3.8	49.1
0	3.9	10.2	3.7
1 - 50	...	...	13.3
51 - loo	38.3	35.7	32.2
Total > 100%	53.4	50.3	50.9
Benefit as a Percent of Maximum Allotment			
1 - 25%	54.8	43.1	31.8
26 - 50%	19.5	15.7	5.2
51 - 75%	5.8	15.2	34.9
76 - 99%	3.8	2.6	12.1
100%	16.2	23.4	16.0
Household Income Includes[b]			
Earnings	49.3	51.1	30.6
SSI	14.4	8.8	21.2
Unemployment compensation	1.3	3.4	4.9
Total Households	100.0	100.0	100.0
Eligible Nonparticipating:			
Persons (thousands)	10,323	12,686	1,806
Households (thousands)	4,711	5,410	813
Benefits (millions)	$265	$445	$63

SOURCES: January 1988 percents were derived from Table 13 of this report. August 1985 percents were derived from Table 12 of Doyle (1990). January 1988 newly eligibles are based on tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

NOTE: Eligible nonparticipants are computed as the difference between eligibles and participants.

[a]Percents may not sum to totals due to rounding error.
[b]Percents do not sum to 100 because households may exhibit more than one of the characteristics listed. Note that the elderly and the disabled categories are not mutually exclusive.

40 percent, compared with 30 percent among all eligible nonparticipating households. This difference reflects the large **FSA-induced** increase in single elderly eligibles whose participation rates were low (shown earlier in Table IV.2). Similarly, newly eligible households that contained children, that comprised single persons, and that were headed by white non-Hispanic persons show a slightly larger proportion of nonparticipants than among all eligible households in 1988.

The distribution of newly eligible nonparticipating households by household income level is also very similar to the income-level distribution among all eligible nonparticipating households in both 1985 and 1988. However, the proportion of nonparticipants eligible to receive 51 to **75** percent of the maximum benefit allotment is higher among newly eligibles than among all eligibles in 1988.

C. SUMMARY

This chapter has shown that the lack of response to the expansionary provisions of the FSA caused the decline in overall participation rates between 1985 and 1988. In the absence of the FSA, overall participation rates in 1988 would have remained at about the same level as they were in 1985. The FSA provisions to raise the asset limit had the greatest impact on the eligible pool of households, and thus participation rates. In particular, households containing single elderly persons, or nonelderly persons with earnings and children (but no public assistance) had the greatest increase in new eligibles as a result of the **FSA** provisions. Because these newly eligibles had uniformly low participation rates, overall participation rates declined. However, in the absence of the **FSA,** participation rates among many of these subgroups would have increased.

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APPENDIX

**TECHNICAL PROCEDURES USED TO COMPUTE PARTICIPATION RATES
AND TO ESTIMATE THE IMPACT OF THE 1985 FSA**

As noted in the text, we derived the participation rates in this study by comparing administrative

A.   USING ADMINISTRATIVE DATA TO ESTIMATE THE NUMBER OF PARTICIPANTS

One reason for the disparities in previous estimates of FSP participation rates (as noted earlier)

to correct for erroneous benefit payments to ineligible households and for under and over payments to eligible households (net reduction of 4.88 percent.)

The third data source is a sample of food stamp case records from the January and February 1988 IQCS samples. We used the sample of case records to calculate the distribution of persons, households, and benefits across various demographic and economic characteristics.

B. USING SIPP TO ESTIMATE THE NUMBER OF ELIGIBLES

We used a multi-step process to derive our estimates of the FSP-eligible population in January 1988. First, using SIPP data, we developed an analysis file that reflected the U.S. population as of January 1988. We then used this file to simulate program eligibility, a process whereby we quantified the program rules defined in the Chapter II and applied them to each dwelling unit in the data base. For each dwelling unit we also estimated its composition, eligibility status, and potential benefits. Section B.1 summarizes how we developed the analysis file, and section B.2 assesses the outcome of the eligibility simulation.

1. Developing the Analysis File

SIPP is a nationally representative longitudinal survey of adults in the United States that provides detailed monthly information on income, program participation, and wealth. It is a multipanel longitudinal survey to which replacement panels are added each year. At the time of this study, only data from the first four panels (1984 through 1987) were available. Each panel contains information on persons in a longitudinal sample followed for a period of two years or more. The longitudinal sample consists of adults age 15 or older who reside in a cross-sectional sample of dwelling units in the United States. These adults, along with other individuals with whom they resided, are interviewed every four months. In each round of interviewing (or "wave"), a core questionnaire collects information on each of the four months preceding the interview date. In most waves, the monthly core questions are supplemented with questions on a variety of topical issues that vary from wave to

wave. Because the interviewing process is staggered, the reference period that is covered in any given wave is not the same for all sample members.

Although the survey is longitudinal, it is designed to support cross-sectional estimates for Census households that reside in the 50 states and the District of Columbia. For this analysis, we derived cross-sectional estimates of food stamp-eligible households from Wave 7 of the 1986 panel and Wave 4 of the 1987 panel, each of which we combined with information collected in other selected waves of the respective panels. Although Wave 7 of the 1986 panel **and** Wave 4 of the 1987 panel were independent samples of the U.S. population, their reference periods overlapped. Furthermore, a straightforward adjustment to the sample weights allowed us to base estimates on combined panels.

We chose these two waves for the following reasons: (1) they sampled the population in the month of January, making the reference period comparable with the administrative data used for the numerator;' (2) they contain topical information on assets; and (3) together, they provide a relatively large sample size (18,870 households). Integrating data from the other waves within each panel was necessary because Waves 7 and 4 do not contain the selected information necessary for estimating food stamp eligibility. Although they do contain measures of monthly income, monthly Census household composition, and assets, they do not contain measures of medical, child care, and shelter expenses, and the information necessary for dete**rmining** disability status is incomplete. We corrected the omissions as follows:

- We imputed out-of-pocket medical expenses on the basis of data from the Consumer Expenditure Survey.

- We linked child-care expenses from Wave 6 to Wave 7 of the 1986 panel and from Wave 3 to Wave 4 of the 1987 Panel, using procedures designed to compensate for changes in circumstances that might have occurred within each panel.

'Because one-fourth of the sample in Wave 7 of the 1986 panel did not include information for the month of January, we deleted this portion of the sample and reweighted the remaining observations.

- We linked shelter expenses from Wave 6 to Wave 7 of the 1986 panel and from Wave 3 to Wave 4 of the 1987 Panel, accounting for changes in circumstances over time.

- We linked disability status from Wave 1 of the respective panels.

A report by **Mathematica** Policy Research, Inc. (1991) provides more detail on how the analysis file used to simulate the **FSP** was developed.

2. An Assessment of the Eligibility Simulation

In brief, given the data limitations outlined below, the procedure used to estimate the eligible population was designed to replicate the eligibility determination process for each household on the SIPP analysis file as closely as possible. In other words, we applied the program **eligibility** and benefit criteria outlined earlier to each household as if it had actually applied for food stamps.

Although SIPP contains more information on the variables necessary for determining FSP eligibility and benefits than does any other available household survey, problems still remain. The simulation procedures described earlier cannot perfectly replicate the eligibility and benefit determination process mandated in the legislation, despite the adjustments and enhancements made to the SIPP data. The specific discrepancies are as follows.

- *Unit definition.* Because SIPP does not measure the complete set of characteristics that are used to determine a food stamp unit (especially information on which dwelling-unit members customarily purchase and prepare food together), the simulated food stamp household is not the same as the unit determined by the food stamp caseworker. For this study, we used the reported program unit composition in Census households that reported FSP benefits to simulate the food stamp household. In other dwelling units with cash assistance, the food stamp household was equal to the cash assistance unit plus any spouses or related children under age 18 in the dwelling. In all other dwelling units, the simulated food stamp household was the same as the Census household **Landa** (1987) and Doyle and Dahymple (1987) discuss using SIPP to construct food stamp households.

- *Countable* assets. We used the financial, nonfinancial, and vehicular assets reported in **SIPP** to estimate countable assets **according** to program rules. However, **SIPP** does not explicitly provide all the measures necessary for this purpose, such as cash on hand. Furthermore, persons not present at the time of the interview are assumed not to have vehicular assets.

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- **Gross income. The** measure of gross income used in this study is close to, but not precisely the same as, gross income reported to the food stamp caseworker. First, survey data on income and program participation, such SIPP, tend to be underreported. For example, the number SIPP was only 82 percent of an independent estimate derived from administrative

SIPP ured in   self-
SIPP

SIPP lated with

child-care
SIPP ses are collected in
SIPP

SIPP.

Disability status. We relied on reported disability and reported income receipt as specified under the program to determine disability. Reporting and measurement errors in SIPP may somewhat distort the number of disabled individuals identified in this manner.

- Measurement error. Several forms of nonsampling errors affect the eligibility simulation, including the underreporting of income and program participation noted earlier, and the misclassification of benefit and income types. Of particular concern is the existence of persons who report participation in SSI or public assistance programs at the same time that they report income on assets in excess of the eligibility limits for those programs (that is, "seemingly-ineligible" participants).

Table A.1 shows the possible bias due to each of these measurement and reporting errors. The net result on estimates of the number of eligibles is uncertain. Underreporting of gross income will bias the estimates of eligible households upward, since more households will appear to have met the income limits than actually did. Also, under the automatic eligibility provision of the Food Security Act of 1985, households comprised entirely of "seemingly-ineligible" SSI or public assistance participants are treated as eligible for food stamps even though their income and assets exceed food stamp eligibility limits. To the extent that the income or asset measure (as opposed to the partici-

TABLE AS

FACTORS TEAT AFFECT THE **SIMULATION** OF FOOD STAMP
ELIGIBILITY WITH **SIPP,** AND THE
DIRECTION OF THE BIAS

Source of Error	Effect on Estimates of the Number of Eligibles
Unit Definition	Underestimate
Countable Assets	Overestimate
Gross Income	
Underreporting	Overestimate
Definition	Underestimate

Program participation
    underreporting and misreporting
	Underestimate of eligibles
	  participating in other programs

Net Income	Unknown
Disability Status	Underestimate
Measurement Error	Unknown
Inconsistencies between income and program participation	Overestimate

pation measure) is correct, the number of food stamp eligible households is overstated. The inability to replicate program regulations perfectly in the calculation of deductions from expenses may also lead to an overestimate of the number of eligible households. Furthermore, selected assets are omitted from our analysis file (for example, persons not present at the time of the interview have zero imputed vehicular assets), thus overestimating the size of the eligible population.

On the other hand, the omission of some types of expenses may bias the measurement of net income upward, thus reducing the estimate of the number of eligible households. Finally, the underrepresentation of some groups of individuals biases the estimates of eligibles downward. As illustrated earlier, the SIPP data seem to significantly under-represent households that receive public assistance. These households form a large portion of the eligible and participating populations. Thus, some of the participation-rate estimates for these households exceed 100 percent.

Doyle (1990) analyzes the impact of selected measurement and reporting errors on measures of food stamp eligibility.

C. TECHNICAL PROCEDURES USED TO ASSESS **THE** IMPACT OF **THE** FOOD SECURITY ACT ON FOOD STAMP PROGRAM PARTICIPATION RATES

In May 1986, the government implemented several major changes to the Food Stamp Program introduced as part of the Food Security Act (FSA) of 1985, many of which increased program eligibility. Among other changes, the maximum amount of **deductible** shelter expenses imposed on households without an elderly or disabled person was separated from the limit on child-care expenses. The earnings deduction was raised from 18 to 20 percent of countable earned income. The asset limit for single elderly households was raised from $1,500 to $3,000, and the asset limit for other nonelderly households was increased from $1,500 to $2,000. Finally, **pure-AFDC/SSI** households were deemed to be automatically eligible for food stamps. This section describes how we estimated the impact of these new provisions on the food stamp participation rate.

We computed the number of eligible and participating households, individuals, and benefits under both the current program and the pre-FSA program, and compared the results. To determine eligible households under the pre-F'SA regulations, we calculated eligibility and benefits as if the FSA rules had not been in effect in 1988. For this purpose, we assumed that Food Stamp Program parameters would have had the same values as those in effect in January 1988, with the following exceptions:

- No automatic eligibility for **pure-AFDC/SSI** households

- An earnings-deduction rate of 18 percent

- Asset limits of $3,000 and $1,500, where the former applies to a household size of two or more with at least one elderly member

- A combined shelter/child-care maximum deduction of $160

We used a somewhat more complicated procedure to determine pre-FSA participants. Based on the winter 1988 sample of participating households from the IQCS, we calculated eligibility and benefits as if the pre-FSA rules had been in effect (using the same assumptions discussed above). We then computed the relative impact of the FSA rules on the sample caseload (that is, 1 percent of the sample caseload would have been ineligible had the pre-FSA rules been in effect). Finally, we applied the relative impact estimates to the adjusted participant controls used to compute January 1988 participation rates.

As discussed in the body of this report, the FSA asset-limit provisions had the greatest impact on the eligible pool of households. In particular, these provisions had a greater effect on the participation rates of single-person elderly households than on the rates of most other groups. Table A2 shows the number of households that were made eligible by each provision of the FSA The impact of the provision to raise the asset limit on single elderly households from $1,500 to $3,000 increased the number of eligible units by nearly 3 percent. In other words, nearly 40 percent of the newly eligible households were single elderly households. Thus, participation rates among elderly

TABLE A.2

**THE INCREMENTAL IMPACT OF THE MAJOR
PROVISIONS OF THE FOOD SECURITY ACT**

FSA Program Provision	January 1988 Newly Eligible Households		Newly Eligible Households as a Percent of Total Eligible Households
	(thousands)	(percent)	(percent)
Automatic eligibility for **AFDC/SSI** households	259[a]	30%	2.3%
Separate shelter and child-care limit	0	0	0
Higher asset limit on nonelderly households	412	48	3.6
Earnings deduction at 20 percent	36	4	0.3
Higher asset limit for elderly living alone	317	37	2.6
Net impact of all of the **above**[b]	866	100	7.0

SOURCE: Estimates for eligibles were derived from tabulations prepared with the January 1988 analysis file developed by MPR from SIPP, 1986 and 1987 panels. The SIPP analysis file contains a total of 18,870 households and 2,431 households eligible for food stamps.

[a]Of these households, 177,000 received SSI, and the remainder received AFDC but not SSI.

[b]The net impact of these provisions is less than the sum of the newly eligible households under each provision considered separately, because households can be subject to more than one provision. Hence, percents add to more than 100.

households and among single-person households declined. In fact, in the absence of the FSA, the participation rate among single person households would have been 49 percent, and the participation rate among elderly households would have been 39 percent, compared with actual rates of 45 percent and 35 percent, respectively.

As mentioned previously, the simulation probably overestimates the impact of the automatic eligibility provision for households in which all members receive AFDC or SSI (pure-AFDC/SSI households), since many of the households that reported participating in SSI appeared to be ineligible for SSI due to high income or assets. Under pre-FSA rules, the high incomes of these households would make them ineligible for food stamps. However, under the new FSA rules, they become eligible for food stamps automatically despite their high incomes and assets--because they report participation in SSI. In the April 1984 SIPP file, just under 15 percent of the total number of persons who reported SSI receipt appeared to be ineligible for SSI benefits (Doyle, Miller and Sears, 1990). While we do not know the number of these persons who reside in *pure*-AFDC/SSI households, we do know that 8 percent of all SSI participants in the January 1988 SIPP data base would be ineligible for food stamps if they applied as separate one-person households (Doyle, 1991).

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Food Stamp Program Participation Rates: January 1989

Current Perspectives on Food Stamp Program Participation

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Food Stamp Program Participation Rates: January 1989

Carole Trippe and Pat Doyle

July 1992

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EXECUTIVE SUMMARY

Policymakers are concerned about the extent to which the Food Stamp Program (FSP) serves its target population, as well as about which subgroups of the target population are more or less likely to participate in the program. This report is the fourth in a series of reports that provides estimates of rates of participation in the FSP, both among the total eligible population and among selected subgroups of that population. This report presents participation rates for January 1989, and compares these rates with the August 1985 and January 1988 rates that were presented in two previous reports in the series.' The participation rates for all three years were derived with a consistent data base and methodology. Specifically, all three rates were derived from administrative counts of participants for the numerator and from Survey of Income and Program Participation (SIPP)-based estimates of eligibles for the denominator.

The FSP participation rate is the ratio of the number of persons (or households) who participate in the FSP (or the actual benefits paid to participants) to the number of persons (or households) who are eligible for the program (or the total benefits payable if all eligible households participated). The estimates presented in this paper indicate that in the 50 states and the District of Columbia in January 1989--

* 59 percent of the eligible individuals participated in the FSP.

- 56 percent of the eligible households participated in the program.

- Participating households received 66 percent of the benefits payable had all eligible households participated.

METHODOLOGICAL ISSUES

A major difficulty in estimating FSP participation rates stems from the difficulty in estimating the denominator of the rate: program eligibility cannot be observed and therefore must be approximated using household survey data. No such survey captures all the characteristics and other data necessary to replicate the food stamp eligibility and benefit determination process exactly. Underreporting of income is also common to all household surveys, including SIPP. (A complete description of the limitations of survey data is found in the appendix.) However, SIPP allows a better approximation of FSP eligibility criteria than surveys like the March Current Population Survey that measure income on an annual basis and do not measure all determinants of program eligibility. SIPP contains, for example, detailed monthly data on income and household composition supplemented with measures of assets and expenses--all variables used in the actual calculations of FSP eligibility. Furthermore, more recent SIPP data support better estimates of program eligibility thanearlier SIPP data because

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'This report compares the January 1989 participation rates with the participation rates for August 1985 (Doyle, 1990) and January 1988 (Trippe and Doyle, 1992). A third report provides estimates of participation rates for August 1984 (Doyle and Beebout, 1988); however, because the estimation procedures have been improved substantially over those that yielded the 1984 rates, the 1984 participation rates are not included in the comparisons.

of the continued improvement in the SIPP questionnaire. Specifically, the January 1989 estimates in this report are derived from a new SIPP survey designed specifically to measure eligibility for needs-tested programs. None of the earlier estimates of FSP participation rates take advantage of the newly integrated survey design.

A second source of difficulty in estimating participation rates is the underreporting of program participation in surveys used to measure program eligibility. Because of the underreporting, we cannot derive unbiased estimates of both the numerator and denominator of the participation rate ratios from the same data source. Therefore, this report uses FSP administrative data on beneficiaries and benefits paid in January 1989, producing accurate measures of the number of participants for the numerator of the participation rates.

COMPARISON OF PARTICIPATION RATES FOR 1985, 1988, AND 1989

Participation rates change when the rate of growth in the number of participants differs from the rate of growth in the number of eligibles. Changes in FSP legislation, economic conditions, and other programs can affect the rate of growth among participants and eligibles, thus changing participation rates. Since these influences often occur simultaneously, it is difficult to sort out their separate effects on participation rates. Usually, one of the influences dominates the others, causing participation rates to change in a particular direction.

The following table shows that FSP participation rates stabilized at about 59 percent among eligible persons between 1988 and 1989 after declining by about 5 percentage points between 1985 and 1988. Participation rates remained steady between January 1988 and January 1989 largely because there were no significant program changes. The number of participants and eligibles grew slightly, but at about the same rate. Despite the growing economy nationally during this period, there were pockets of recession around the country that may have increased the number of participants and eligibles in some areas. Furthermore, expansions in Medicaid may have slightly increased the number of participating households.

Participation rates declined between 1985 and 1988 because the number of eligibles increased substantially, while the number of participants remained constant. The expansion in the number of eligibles was due largely to the more generous eligibility criteria granted under the 1985 Food Security Act (FSA). However, there was little or no change in the number of participants because only 6 percent of those households that were made eligible under the FSA joined the program. The lack of participation among the newly eligible under the FSA is not so surprising given the historically lower-than-average participation rates for the groups most affected by the new eligibility provisions of the FSA (that is, households with single and elderly persons), the growing economy between 1985 and 1988, and the relatively subtle nature of the expansions.

COMPARISON OF PARTICIPATION RATES FOR 1985, 1988, AND 1989

	Participation Rates (Percent)		
	August 1985	January 1988	January 1989
Individuals	64.3	**59.0**	59.1
Households	59.4	56.0	**55.5**
Benefits	**75.3**	66.7	66.0

The table shows that in all three years the benefit participation rate was substantially higher than both the individual participation rate and the household rate, and that the individual rate was higher than the household rate. This consistent pattern indicates that households with higher benefit levels, and thus greater need, are more likely to participate than households with lower benefit levels. It also implies that larger households are more likely to participate than smaller households.

Changes in Participation Since 1989

FSP caseload data show that the number of FSP participants climbed steadily since spring 1989. Over 6 and a half million more persons were receiving food stamps in December 1991 than in January 1989. Factors such as the worsening economy suggest that the number of eligible persons has also risen since 1989. However, we cannot estimate by how much the number of eligibles, and thus participation rates, increased since 1989 until the SIPP survey data for this time period are available. The relevant SIPP data for 1991 should be available by mid-1993. If the surge in participants is coming from the pool of nonparticipating eligibles, or grows at a faster rate than the eligible population, then FSP participation rates will rise after January 1989.

ESTIMATES OF PARTICIPATION RATES BY SELECTED DEMOGRAPHIC CHARACTERISTICS

The following are highlights of the January 1989 participation-rate estimates across selected demographic groups:

- Eligible children participated in the FSP at higher-than-average rates. For example, 73 percent of eligible preschool children and 66 percent of eligible school children resided in households that participated in the FSP.

- Conversely, the participation rate for elderly persons was much lower than average (29 percent). The rate was higher among elderly who lived alone (32 percent) than among those who lived with others (24 percent).

- Among the disabled, 57 percent of the eligible individuals and eligible households participated, and those who lived alone participated at much higher rates (90 percent) than those who lived with others (44 percent).

- Participation rates for households headed by a single woman with children were much higher than average (78 percent).

- Households headed by black, non-Hispanic individuals participated at a much higher rate (77 percent) than households headed by white, non-Hispanic individuals (46 percent) or Hispanic individuals (51 percent).

ESTIMATES OF PARTICIPATION RATES BY SELECTED ECONOMIC CHARACTERISTICS

The following are highlights of the January 1989 participation-rate estimates across selected economic groups:

- Participation rates increased as potential benefits rose. Households eligible for the smallest benefits participate at the lowest rate (32 percent). Rates increased as potential benefits increased, reaching 83 percent for households eligible for benefits of 76 percent to 99 percent of the maximum.

- Participation rates were much higher among persons in households whose income was below the poverty level (74 percent) than for persons in households whose income was above the poverty level (17 percent). The same was true for households below and above poverty (72 percent and 14 percent respectively) and for benefits issued to households below and above poverty (72 percent and 16 percent respectively). Participation rates generally declined as income rose.

- Households with earnings participated at a lower-than-average rate (32 percent), whereas households that received SSI or public assistance participated at higher-than-average rates (67 and 121 percent, respectively).[2]

THE CHARACTERISTICS OF ELIGIBLE NONPARTICIPANTS

Approximately 5.7 million of the 12.7 million households eligible for food stamps did not participate in the program. These 5.7 million households comprised 12.7 million persons eligible for $478 million in benefits in January 1989. More than half (56 percent) of the eligible nonparticipants had income above the poverty line; 39 percent were eligible for a relatively small monthly benefit (1 to 25 percent of the maximum allotment). Overall, more than half of the nonparticipants (56 percent) were households with elderly persons and about 45 percent were households with workers, with about equal numbers falling above and below the poverty line in both groups. Elderly nonparticipating households tended to consist of a single individual, while nonelderly nonparticipating households tended to consist of wage earners below poverty with children. Most of the persons in eligible nonparticipating households with above-poverty income were eligible for small monthly benefits ($23 on average in January 1989), and, hence, their lack of participation is not surprising.

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[2]The greater than 100 percent figure among public assistance recipients is due to underreporting of public assistance income in the survey. This level of sampling error does not occur with other characteristics reported in the survey, so such an anomalously high participation rate is not found among other subgroups.

I. INTRODUCTION

The Food Stamp Program (FSP) provides assistance to low-income households to help them buy the food they need to obtain a nutritious diet. A food stamp household is generally defined as a person who lives alone, or as a group of persons who live together and share food purchases and meal preparation and whose monthly income and assets fall below specified limits. The assistance is provided in the form of coupons that can be redeemed for food purchases. The amount of the coupons is based on the size and income of the household.

Not all households eligible for food stamps participate in the program. The literature on the program suggests a variety of reasons for nonparticipation (**Allin** and **Beebout,** 1989). Some persons may be unaware of the program, while others may presume that they are not eligible for benefits. Other persons may be aware of the program and their own eligibility for it, but feel that the benefits are not worth the effort required to obtain and use them. Still others may not participate due to the stigma they associate with using food stamps.

Obviously, since some eligible households do not apply for benefits, FSP benefits are not being used by the entire population targeted by the legislation that established the program. Indeed, according to conceptual models of the decision to participate in the program, participation should not be expected to be universal (see **Allin** and **Beebout,** 1989). But even if participation will never be universal, the Congress and other policymakers are interested in the proportion and characteristics of the eligible population that does participate in the program. They are also interested in the subgroups of the target population that are most likely to participate in the program, as well as in the characteristics of persons who are eligible for but do not participate 'in the program.

This paper is the ninth in a series that has examined current issues on **FSP** participation. It is the fourth that provides estimates of rates of participation in the FSP, both among the total eligible population and among selected subgroups of that population that are of particular interest to

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policymakers.' The estimates reported in this series are more comprehensive and accurate than most previous estimates. Previous estimates of FSP participation have varied widely due to differences in methodologies and data sources, and inadequacies with the data sources.[2]

The participation-rate estimates in this series of papers are more accurate than most previous ones, primarily because the estimates of eligibles on which they are based are derived from data in the Survey of Income and Program Participation (SIPP). Because eligibility for the FSP cannot be observed directly, the denominator of the participation rate (the total number of program eligibles or total potential benefits) must be approximated with household survey data. Relative to the household surveys used in previous research, such as the Current Population Survey (CPS), SIPP contains a greater amount of and more detailed information on the household characteristics that FSP administrators must consider when making actual eligibility determinations.[3] For example, SIPP contains information on monthly (as opposed to annual) income, monthly household composition, expenses used to calculate deductions from income, and vehicular assets, thereby significantly advancing our ability to approximate eligibility status with survey data.

Data for the numerator of the overall participation rate (the number of program participants or total benefits paid) were derived from the Food Stamp Program Statistical Summary of Operations (hereafter referred to as Program Operations data) and were adjusted to account for benefits issued in error in January 1989.[4] These administrative data are more accurate than the self-reported survey data used in some previous studies of FSP participation, because research indicates that food stamp

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'The first three papers provided estimates of participation rates for August 1984 (Doyle and Beebout, 1988), August 1985 (Doyle, 1990) and January 1988 (Trippe and Doyle, 1992). Due to the substantial methodological improvements made to the estimation procedures since the August 1984 rates, only the August 1985, January 1988, and January 1989 rates are strictly comparable.

[2]Trippe (1989) reviews the literature on FSP participation rates and estimation techniques.

[3]The exception is the 1979 Income Survey Development Program (ISDP) Research Test Panel, the precursor to SIPP.

[4]The Food Stamp Program Statistical Summary of Operations is a monthly record of benefits issued and the caseload served by the Food Stamp Program.

receipt is substantially underreported in household survey data. Because the numerators of the ratios reported herein are based on administrative counts, they are more reliable estimates of the number of actual participants and the amount of benefits paid. However, because Program Operations data do not contain information on subgroups of the participating population, we calculated estimates for these groups from a sample of food stamp case records from the Integrated Quality Control System (IQCS) of the U.S. Department of Agriculture?

Although our SIPP-based estimates represent an improvement over previous results, they are not without their own sampling and measurement limitations. In particular, the underreporting of public assistance income and receipt that is common to all household surveys yields unrealistic estimates of food stamp participation rates among public assistance households. Furthermore, the survey does not provide all of the information necessary for a precise determination of the food-stamp-eligible unit in all households. Finally, a number of persons who reported SSI receipt in SIPP appeared to be ineligible for SSI due to high income or assets, potentially distorting the estimate of pure SSI households who are automatically eligible for the FSP. As discussed in the appendix, these sampling and measurement limitations have mixed effects on the estimates of program eligibles and hence the net result on estimates of participation rates is uncertain. In short, although this analysis represents a considerable improvement over most previous efforts, perfect statistics on the FSP-eligible population or on subgroups that participate in the program are unattainable. Further research can reduce, but not eliminate, the uncertainties in estimation.

The remainder of this report is organized as follows. Chapter II summarizes the methodology and data used to estimate participation rates. Chapter III presents the overall participation rates for January 1989, the rates disaggregated by selected demographic and economic characteristics, and the characteristics of those eligibles who did not participate. Chapter IV compares the January 1989

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[5]The IQCS is a system of ongoing case record reviews that measure payment error rates in the Food Stamp, Aid to Families with Dependent Children (AFDC), and Medicaid programs. The IQCS is based on monthly probability samples drawn from all 50 states and the District of Columbia; our study uses active cases in the January/February 1989 samples.

participation rates with the August 1985 and January 1988 participation rates provided in Doyle (1990) and Trippe and Doyle (1992), respectively. The Appendix describes the technical procedures used to compute the 1989 participation rates.

II. METHODOLOGY AND DATA

This section describes our methodology for constructing the January 1989 FSP participation rates. Three rates are introduced and defined, followed by a discussion of how they were computed. The latter discussion also describes the criteria that FSP administrators use to make eligibility and benefit determinations, as well as the model of those criteria that we used to estimate the number of eligibles with SIPP data.

A. THREE ALTERNATIVE MEASURES OF FSP PARTICIPATION

No single measure of participation can adequately answer all the questions that policymakers have about FSP participation. The three measures discussed in the literature--the individual rate, the household rate, and the benefit rate--differ in terms of their magnitude and their advantages and limitations for answering a given question.   Here, we define each measure, specify its potential usefulness, and explain its application in previous studies.

1. The Individual Participation Rate

The individual participation rate is a ratio of the number of persons participating in the FSP to the number of persons eligible for the program. Policy discussions about FSP participation rates often rely on research results based on the individual rate, whereas discussions about participation behavior usually rely on a model of the household as the decision-making unit. In some instances, the individual rate may be preferable to the household rate, especially for answering questions about the participation of a particular subgroup of the target population. For example, the proportion of eligible elderly individuals who participate in the FSP is a better indication of the behavioral patterns of the elderly than is the proportion of eligible households that contain an elderly member who participates.

2. The Household Participation Rate

The household participation rate is the ratio of the number of food stamp units, or households, that participate in the program to the number of households eligible for the program. As just noted, analyses of participation behavior tend to rely on this rate because they assume that the household is the decision-making unit. The definition of the household as the decision-making unit is derived from program rules that determine eligibility and benefits for households, not for individuals. The household rate can differ significantly from the individual rate because larger households are more likely than one-person households to participate in the **FSP.**

3. The Benefit Rate

The benefit rate is the ratio of the benefits paid to program participants to the total potential benefits payable if all program eligibles participated. Although it has not been used extensively in previous research, the benefit rate may be the best overall measure of how well the FSP is meeting the target population's need for assistance. The benefit-rate estimates reported herein are generally higher than the individual- and household-rate estimates, indicating that households with higher benefit levels, and thus greater need, are more likely to participate than are households with lower benefit levels.

B. ESTIMATION OF PARTICIPATION RATES

We used administrative data derived from three sources to estimate the numerators in the participation-rate ratios (as described in the Appendix). The first source is the Program Operations data, which provided the number of persons and households that were issued benefits in January 1989 and the total dollar value of the coupons issued. Second, we used information provided by the Food and Nutrition Service based on the IQCS to eliminate ineligible participants and erroneous benefits from the Program Operations data because these ineligible participants and their benefit levels cannot **be** captured in the SIPP-based estimates of eligibles. Third, we used information derived from a

sample of case records active in January and February 1989 to distribute the adjusted total number of participating households and persons and their benefits across various demographic and economic characteristics.'

We used the procedures outlined in the Appendix to develop estimates of the denominators of the participation-rate ratios from SIPP. In essence, a model of the food stamp eligibility criteria determined which SIPP respondents belonged in the sample of program eligibles. This model relied on a simulation procedure whereby we quantified program rules and applied them to each dwelling unit in the January 1989 SIPP sample. For units determined to be eligible via this simulation, we estimated their composition and potential benefits. Below, we summarize the criteria that program administrators use to determine eligibility and benefits, and that we simulate to the extent that the SIPP data permit.

Eligibility for the FSP is based on a series of rules that define the applicant's need, which is deemed to be a function of available cash income conditional on unit (household) size, as well as the assets accessible to the unit.[2] The determination of need for each household that applies for FSP benefits can be disaggregated into four distinct components: (1) income limits, (2) asset limits, (3) nonfinancial standards, and (4) benefit levels. The parameters of each of these components vary over time with cost-of-living adjustments and legislative changes to the program. This analysis relies on the FSP criteria in existence in January 1989, the month corresponding to the administrative and SIPP data used.

The income test comprises two parts: a net income screen and a gross income screen. Under the net income screen, the monthly gross income net of allowable expenses must fall below the

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'This sample of cases was developed in the process of preparing an annual report on the characteristics of food stamp households (U.S. Department of Agriculture, 1991).

[2]The discussion that follows is an overview of the regulations that govern FSP eligibility and benefits. The complete regulations appear in the Code *of Federal Regulations (7* CFR, parts 270-273).

monthly federal poverty guidelines, which vary by household size and geographic location.[3] Under the gross income screen, food stamp units that do not contain elderly or disabled members must also have gross income below 130 percent of the same poverty guidelines. In January 1989, the program measured gross income as all cash income received by members of the food stamp household excluding the earnings of students under age 18, loans, nonrecurring lump-sum payments, and reimbursements for certain expenses. Net income was defined as gross income less a standard deduction, an earnings deduction, and deductions for expenses incurred for child care, medical, and excess shelter costs.[4]

Two different asset limits are imposed. In 1989, a food stamp household could have countable assets (or "resources," as they are called in the administration of the program) of $2,000 or less and remain eligible for benefits. If the household contained an elderly person, the asset limit was $3,000. Selected pieces of property, such as the principal home, adjacent land, most household goods, and vehicles necessary for producing income or for transporting disabled individuals, are not considered countable resources, but all other financial and nonfinancial assets are generally included. In most instances, assets are counted at their equity value as long as they are accessible to at least one member of the food stamp household. The principal exception is the treatment of vehicular assets.[5]

Nonfinancial eligibility standards include the definition of the program unit and the characteristics of the unit (such as the presence of an elderly member) that affect eligibility. In general, food stamp

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[3] The income limits are based on the official monthly poverty guidelines published by the U.S. Department of Health and Human Services (DHHS), which are adjusted each year to account for inflation. The income guidelines and other FSP parameters are generally the same for the 48 contiguous states and the District of Columbia and vary slightly for Alaska and Hawaii and the territories.

[4] The medical deduction is allowed only for medical expenses incurred by elderly or disabled members of the household.

'Vehicles required for work-related travel, and one additional vehicle owned by members of the food stamp household, are valued at the current Blue Book value, and only the amount that exceeds $4,500 is considered to be an available resource. Any remaining vehicles owned by members of the household are subject to both a market-value test and an equity test. The maximum of market value less $4,500, and the equity is counted towards the household's assets.

benefits are issued to "households," but aspects of the program unit definition distinguish the term from the Bureau of the Census' designation--namely, a group of individuals who share living quarters.[6] The food stamp household consists of a person who lives alone, or persons who live together and share food purchases and meal preparation, with some exceptions for households that contain elderly individuals who are unable to prepare their own meals. Restrictions are imposed on the food stamp household to prevent spouses, siblings, and parents with children under age 18 from forming separate units within a dwelling unit even if they purchase and prepare meals separately?[7] Furthermore, selected individuals within a dwelling unit are excluded from FSP participation. They include illegal aliens, persons who refuse to comply with work registration requirements, strikers, and residents of most institutions. The FSP also contains several provisions that require able-bodied adults to work, seek training in preparation for work, or look for work. Individuals not exempt from these work registration requirements are prohibited from participating in the program if they refuse to comply. Finally, food stamp households consisting entirely of persons participating in the SSI or AFDC programs are automatically eligible for food stamps, regardless of their income and asset holdings.

Households deemed eligible according to these criteria receive benefits that are computed as the difference between the maximum food stamp benefit for their household size and geographic location and 30 percent of their net monthly income.'[8] In January 1989, the maximum food stamp benefit in the continental United States was $300 for a family of four. Households consisting of only one

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[6]**Groups** of individuals who share living quarters are referred to as "dwelling units" or "Census households." The latter term is significant in this analysis because the dwelling unit is commonly the interview unit used by the Census Bureau to collect survey data on the U.S. population. Specifically, as noted in the "Introduction," the dwelling unit is the interview unit for-SIPP.

'The Stewart B. **McKinney** Homeless Assistance Act (P.L. 100-77) relaxed these restrictions for certain households. This Act grants separate household status to parents of minor children who live with siblings or parents (the grandparents of children) if they purchase and prepare food separately.

[8]**The** maximum food stamp benefit in 1989 was equal to 100.65 percent of the Thrifty Food Plan for the preceding June for a family of four, adjusted for the size of the unit according to economies of scale.

or two people whose benefit computation is less than $10 in coupon value are issued a minimum benefit of $10.

The January 1989 SIPP data contain more of the information needed to determine FSP eligibility than ever before. This is because the January 1989 SIPP data contain, for the first time, a set of specially-designed questions focused on determining program eligibility. The newly designed "eligibility module" represents an improvement over previous SIPP data because (1) it contains most of the information that was omitted in previous SIPP files that is needed to estimate eligibility; and (2) almost all of the eligibility information is collected simultaneously for the same group of persons, and thus does not have to be integrated across time. The Appendix discusses the SIPP eligibility module in more detail.

III, RESULTS

Over 7 million households in the 50 states and the District of Columbia participated in the Food Stamp Program in January 1989 (Table 111.1). Based on the estimates prepared from **SIPP,** 12.7 million households were eligible for the program in that same month. Thus, the overall household participation rate was 56 percent. The overall individual rate was higher: 18.3 million individuals of 31.0 million eligible individuals, or 59 percent, participated in the FSP.

The Food Stamp Program issued $927 million in benefits in January 1989, which is 66 percent of the benefits to which eligible households were entitled. This percentage is consistent with the finding (shown later) that households entitled to higher benefits participated at higher rates than those entitled to lower benefits.

The fact that the benefit rate was higher than the individual rate, which in turn was higher than the household rate, implies that, among other factors, both the size of the household and its potential benefit influence the decision to participate. The influence of household size and other demographic characteristics on the tendency to apply for benefits is outlined in Section A, the influence of potential benefits and other economic characteristics is discussed in Section B. Section C discusses the characteristics of eligible households that did not participate in the FSP in January 1989.

A. PARTICIPATION BATES BY SELECTED DEMOGRAPHIC CHARACTERISTICS

Table III.2 presents household participation rates disaggregated by the size of the eligible household. Most eligible households were relatively small, as were most participating households. Yet the participation rate tended to be higher for larger households, with single-person households participating at a rate that was 26 percentage points lower than three-person households in January 1989. Participation rates peak for households that contain three persons, and decline with household

TABLE 111.1

INDIVIDUAL, HOUSEHOLD, AND BENEFIT
PARTICIPATION RATES: JANUARY 1989

	Participants	Eligibles	Participation Rate
Individuals (in Thousands)	18,344	31,041	59.1 %
Households (in Thousands)	7,037	12,689	55.5
Benefits (in Thousands)	$927,391	**$1,405,636**	66.0
Average Household Size	2.6	2.5	
Average per-Capita Benefit	$50.6	$45.3	

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for ineligible participants and benefits issued in error. Estimates for eligibles were derived from tabulations prepared with the January 1989 analysis file developed by MPR from SIPP, 1987 and 1988 panels. The SIPP analysis file contains a sample of 22,040 households and 2,843 households eligible for food stamps.

TABLE III.2

HOUSEHOLD PARTICIPATION RATES BY
HOUSEHOLD SIZE: JANUARY 1989

Household Size (number of persons)	Number of Participating Households (in Thousands)	Number of Eligible Households (in Thousands)	Household Participation Rate
1	2,298	5,144	44.7 %
2	1,591	2,660	59.8
3	1,336	1,901	70.3
4	937	1,361	68.8
5	486	834	58.2
6+	388	788	49.3
Total	7,037	12,689	55.5

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for ineligible participants. Counts of participants were distributed across subgroups of the population based on a sample of 10,514 food stamp case records from the IQCS for January and February 1989. Estimates for eligibles were derived from tabulations prepared with the January 1989 analysis file developed by MPR from SIPP, 1987 and 1988 panels. The SIPP analysis file contains a sample of 22,040 households and 2,843 households eligible for food stamps.

sizes of more than three persons. Nonetheless, rates for all household sizes of more than three persons are higher than the rates for single-person households.

Table **III.3** presents individual participation rates disaggregated by selected demographic characteristics. The table shows that the **FSP** was serving a large majority of children in eligible households in January 1989. Almost three-fourths of eligible preschool children (that is, children under age 5) resided in households that participated in the program. Among school-age children, this rate was 66 percent. Among all eligibles, females participated at a slightly higher rate than males (60 percent versus 57 percent).

The participation rate for elderly individuals (29 percent) was much lower than both the overall rate for individuals (59 percent) and the rate for adults ages 18 to 59 (60 percent). Participation rates for elderly persons are consistently lower than rates for other persons because elderly persons tend to live in smaller households, have higher per-capita incomes, and receive smaller monthly benefits than others--all characteristics associated with low participation rates. Furthermore, the participation rate for elderly persons living alone (32 percent) was lower than the participation rate for other adults living alone (84 percent). Martini (1992) examined which of the two effects--living alone or being elderly--was the more important determinant of the low participation rate among elderly who live alone, and found that both characteristics had a large independent impact on the rate. The participation rate for disabled individuals (57 percent) was only slightly lower than the overall rate for eligible individuals and adults.

Among elderly and disabled persons, participation rates were higher for those who lived alone (32 percent and 90 percent) than for those who lived with others (24 percent and 44 percent). This finding may suggest that elderly and disabled persons who live with others have greater access to outside resources that reduce their likelihood of participating.

Participation rates were slightly higher for persons living inside metropolitan areas (60 percent) than for persons living outside metropolitan areas (57 percent).

TABLE III.3

INDIVIDUAL PARTICIPATION RATES BY SELECTED
DEMOGRAPHIC CHARACTERISTICS: JANUARY 1989

	Number of Participating Individuals (in Thousands)	Number of Eligible Individuals (in Thousands)	Individual Participation Rate
Elderly Age 60 or Older	1,427	**5,000**	28.5 %
Living alone	948	3,004	31.5
Living with others	480	1,996	24.0
Disabled under Age 60	680	1,187	57.3
Living alone	302	336	89.9
Living with others	378	852	44.4
Children under Age 18	9,098	13,372	68.0
Preschool	3,065	4,176	73.4
School-age	6,032	9,196	65.6
Adults Ages 18 to 59 (includes disabled adults)	7,539	12,668	59.5
Living alone (not disabled)	1,028	1,222	84.1
Gender			
Male	7,342	12,823	57.3
Female	11,002	18,218	60.4
Metropolitan **Status**[a]			
Inside metropolitan area	13,162	21,866	60.2
Outside metropolitan area	5,182	9,175	56.5
Total	18,344	31,041	59.1

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for ineligible participants. Counts of participants were distributed across subgroups of the population based on a sample of 10,514 food stamp case records from the IQCS for January and February 1989. Estimates for eligibles were derived from tabulations prepared with the January 1989 analysis file developed by MPR from SIPP, 1987 and 1988 panels. The SIPP analysis' **file** contains a sample of 22,040 households and 2,843 households eligible for food stamps.

'Estimates of the number of eligibles were adjusted by an inflation factor to compensate for the subsampling of the metropolitan population in SIPP. The adjustment factors are published in Table 5 of the technical documentation of the SIPP 1988 Panel (U.S. Department of Commerce, 1991). The non-metropolitan eligible population is computed as the difference between the total population and the metropolitan population.

Table III.4 presents household participation rates by selected demographic characteristics. As the table shows, there is a wide range in participation rates among groups. As with individual rates, the household rates show that households containing elderly persons were less likely to participate in the program than average. Households containing disabled persons were slightly more likely to participate than average. Only 29 percent of the eligible households that contained an elderly member participated, while 57 percent of the households that contained a disabled member participated in January 1989.

Among households with children, the participation rate was 70 percent, which is much higher than the overall household rate (56 percent). The participation rate among single male-headed food stamp households with children (57 percent) was considerably lower than the participation rate among single female-headed households with children (78 percent). However, it should be noted that the single male-headed rate was based on a relatively small sample. Participation rates are slightly higher among households residing inside metropolitan areas than among those residing outside metropolitan areas.

Food stamp participation rates vary considerably by race and ethnicity. More than three-fourths of the eligible households headed by a black, non-Hispanic individual participated in the FSP in January 1989, compared with only 46 percent of the eligible households headed by a white, non-Hispanic individual. Hispanic households participated at a rate of 51 percent.

Table III.5 presents benefit participation rates by selected demographic characteristics. While the overall benefit participation rate (66 percent) was higher than the overall household rate (56 percent), within most subgroups shown, the benefit rates were about the same as the corresponding household rates. Hence, overall, households that were eligible for higher benefits (needier households) participate at higher rates than do households eligible for lower benefits (less needy households). However, for many of the subgroups, including households with elderly, children, or single female parents, the expected benefit amount does not affect the likelihood of participation.

TABLE III.4

HOUSEHOLD PARTICIPATION RATES BY SELECTED
DEMOGRAPHIC CHARACTERISTICS: JANUARY 1989

	Number of Participating Households (in Thousands)	Number of Eligible Households (in Thousands)	Household Participation Rate
Household Contains:			
Elderly Age 60 or Older	1,291	4,451	29.0 %
Disabled under Age 60	640	1,115	57.4
Children under Age 18	4,216	6,010	70.1
Children Ages 5 to 17	3,165	4,644	68.2
Single Female Adult with Children	2,718	3,507	77.5
Single Male Adult with Children	109	192	56.7
Two or More Adults with Children[a]	1,389	2,296	60.5
White non-Hispanic Head	3,283	7,146	45.9
Black non-Hispanic Head	2,653	3,452	76.9
Hispanic Head	890	1,763	50.5
Metropolitan Status:[b]			
Inside metropolitan area	5,122	9,051	56.6
Outside metropolitan area	1,915	3,639	52.6
Total[c]	7.037	12.689	55.5

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for ineligible participants. Counts of participants were distributed across subgroups of the population based on a sample of 10,514 food stamp case records from the IQCS for January and February 1989. Estimates for eligibles were derived from tabulations prepared with the January 1989 analysis file developed by MPR from SIPP, 1987 and 1988 panels. The SIPP analysis file contains a sample of 22,040 households and 2,843 households eligible for food stamps.

[a]Includes both households in which the gender of the household head is unknown and female-headed households that contain two or more adults.

[b]Estimates of the number of eligibles were adjusted by an inflation factor to compensate for the subsampling of the metropolitan population in SIPP. The adjustment factors are published in Table 5 of the technical documentation of the SIPP 1988 Panel (U.S. Department of Commerce, 1991). The non-metropolitan eligible population is computed as the difference between the total population and the metropolitan population.

[c]Categories do not sum to total because households may-exhibit more than one of the characteristics listed.

TABLE III.5

BENEFIT RATES BY SELECTED DEMOGRAPHIC
CHARACTERISTICS OF THE HOUSEHOLD:
JANUARY 1989

	Benefits Paid to Participating Households (in Millions)	Potential Benefits for Eligible Households (in Millions)	Benefit Rate
Household Contains:			
Elderly Age 60 or Older	$66.0	$214.1	30.8 %
Disabled under Age 60	54.7	103.5	52.8
Children under Age 18	750.2	1,048.0	71.6
Children Ages 5 to 17	595.5	848.6	70.2
Single Female Adult with Children	452.5	585.6	77.3
Single Male Adult with Children	17.6	26.3	67.0
Two or More Adults with Children[a]	280.1	433.5	64.6
White non-Hispanic Head	397.7	668.2	59.5
Black non-Hispanic Head	365.7	443.0	82.6
Hispanic Head	130.7	244.9	53.4
Metropolitan Status:[b]			
Inside metropolitan area	669.3	1,011.0	66.2
Outside metropolitan area	258.1	394.6	65.4
Total	927.4	1,405.6	66.0

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Counts of participants were distributed across subgroups of the population based on a sample of 10,514 food stamp case records from the IQCS for January and February 1989. Estimates for eligibles were derived from tabulations prepared with the January 1989 analysis file developed by MPR from SIPP, 1987 and 1988 panels. The SIPP analysis file contains a sample of 22,040 households and 2,843 households eligible for food stamps.

[a]Includes both households in which the gender of the household head is unknown and female-headed households that contain two or more adults. Benefit rates were almost identical to household rates for single female-headed and male-headed households.

[b]Estimates of the number of eligibles were adjusted by an inflation factor to compensate for the subsampling of the metropolitan population in SIPP. The adjustment factors are published in Table 5 of the technical documentation of the SIPP 1988 Panel (U.S. Department of Commerce, 1991). The non-metropolitan eligible population is computed as the difference between the total population and the metropolitan population,

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The benefit rates were substantially higher than the household rates for only two groups: (1) households headed by white non-Hispanics (14 percentage points higher), and (2) households that contained a single male adult with children (10 percentage points higher). For these two groups, benefit levels probably have a greater influence on their participation decisions than they do on the decisions of other households. However, because the sample size for eligible households headed by a single male with children was small, the statistical reliability for this group is low.

The benefit rate was lower than the household rate for only one group: households that contain a disabled member under age 60 '(5 percentage points lower). However, this finding is not too surprising since the decision to participate in the FSP of many households containing disabled members is made jointly with their decision to participate in the SSI program. Hence, they would participate in the **FSP** regardless of their expected food stamp benefit. Furthermore, households in which all members receive SSI are automatically eligible for food stamps.

B. PARTICIPATION BATES BY SELECTED ECONOMIC CHARACTERISTICS

Table III.6 presents household participation rates disaggregated by the level of potential benefits as a percentage of the maximum allotment. The estimates support research which shows that the decision to participate in the FSP is influenced by the level of benefits for which a household is eligible.* In January 1989, households eligible for the smallest benefits (benefits of between 1 percent and 25 percent of the maximum allotment, which is up to 25 dollars in benefits for households with 4 persons) had the lowest participation rate (32 percent). Participation rates increased as potential benefits rose, reaching 83 percent for households eligible for benefits of 76 percent to 99 percent of the maximum.

The only exception to this pattern is a decline in the rate for households entitled to the maximum benefit allotment. As will be shown in Chapter IV, the unusually low participation rate for

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[1]**Allin** and **Beebout** (1989) review the research on the relationship between benefit levels and FSP participation.

TABLE III.6

HOUSEHOLD PARTICIPATION RATES BY MONTHLY BENEFITS AS A PERCENTAGE OF THE MAXIMUM FSP ALLOTMENT
JANUARY 1989

Monthly Benefit Level as a Percentage of Maximum Allotment[a]	Number of Participating Households (in Thousands)	Number of Eligible Households (in Thousands)	Household Participation Rate
1-25%	1,032	3,232	31.9 %
26-50	1,315	2,573	51.1
51-75	1,835	2,520	72.8
76-99	1,501	1,800	83.4
100	1,353	2,564	52.8
Total	7,037	12,689	55.5

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for ineligible participants. Counts of participants were distributed across subgroups of the population based on a sample of 10,514 food stamp case records from the IQCS for January and February 1989. Estimates for eligibles were derived from tabulations prepared with the January 1989 analysis file developed by MPR from SIPP, 1987 and 1988 panels. The SIPP analysis file contains a sample of 22,040 households and 2,843 households eligible for food stamps.

[a]The maximum allotment varies by household size. The maximum allotment for a family of 4 in January 1989 was $300.

households eligible for the maximum benefit was also found in estimates for 1988 and 1985. In those estimates, it was assumed that the low participation rate was associated with measurement or classification problems of eligible households with zero gross income. However, in the 1989 estimate, it appears that most of the households eligible for the maximum benefit had positive gross income and high expenses which reduced their net income to **zero.**[2] Hence, although there may be some measurement or classification problems causing the low participation rate for households eligible for the maximum benefit, the zero gross income problem may not be a major factor in 1989.

Table III.7 shows that eligible individuals in households whose income was below the poverty level participated in the program at much higher rates (74 percent) than did individuals who lived in households whose income was above the poverty level (17 percent). Similarly, 72 percent of households in poverty participated, receiving 72 percent of the benefits which would have been issued had all poor households participated (Tables III.8 and 111.9). The higher participation rates for households in poverty is not surprising since they are eligible for higher benefits than are households with incomes above poverty. For example, persons in eligible households in poverty were eligible for $20 on average in January 1989, while persons in households whose income was below the poverty level were eligible for $54 on average.

As expected, participation rates declined as income increased in January 1989. For example, participation rates for individuals in households with zero income were 88 percent in January 1989, and declined as income rose, reaching 17 percent for those in households whose incomes were above the poverty line. Similar patterns were found for households and for potential benefit **levels.**[3] Studies of participation rates in other programs, such as SSI, have also found that participation rates

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[2]**Over** 60 percent of the households eligible for the maximum benefit in January 1989 had positive gross income and high expenses relative to their income. Only about 43 percent of these households participate in the FSP.

[3]**The** only exception to this pattern was a slightly lower participation rate (4 percentage points lower) for households with zero income than for households whose incomes were between 1 and 50 percent of the poverty level.

TABLE III.7

INDIVIDUAL PARTICIPATION **RATES** BY THE
RATIO OF THE GROSS INCOME OF THE INDIVIDUAL'S FOOD
STAMP UNIT TO THE MONTHLY FEDERAL POVERTY LEVEL:
JANUARY 1989

Income as a Percentage of Poverty.	Number of Participating Individuals (in Thousands)	Number of Eligible Individuals (in Thousands)	Individual Participation Rate
Total ≤ 100	17,032	23,167	73.5 %
0	1,084	1,230	88.1
1-50	6,618	8,219	80.5
51-100	9,331	13,718	68.0
Total > 100	1,311	7,873	16.7
Total	18,344	31,041	59.1

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for ineligible participants. Counts of participants were distributed across subgroups of the population based on a sample of 10,514 food stamp case records from the IQCS for January and February 1989. Estimates for eligibles were derived from tabulations prepared with the January 1989 analysis file developed by MPR from SIPP, 1987 and 1988 panels. The SIPP analysis file contains a sample of 22,040 households and 2,843 households eligible for food stamps.

TABLE 111.8

HOUSEHOLD PARTICIPATION RATES BY THE RATIO OF THE
GROSS INCOME OF THE FOOD STAMP UNIT TO THE MONTHLY
FEDERAL POVERTY LEVEL: JANUARY 1989

Income as a Percentage of Poverty	Number of Participating Households (in Thousands)	Number of Eligible Households (in Thousands)	Household Participation Rate
Total ≤ 100	6,519	9,030	72.2 %
0	532	647	82.2
1-50	2,224	2,573	86.5
51-100	3,763	5,811	64.8
Total > 100	518	3,659	14.2
Total	7,037	12,689	55.5

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for ineligible participants. Counts of participants were distributed across subgroups of the population based on a sample of 10,514 food stamp case records from the IQCS for January and February 1989. Estimates for eligibles were derived from tabulations prepared with the January 1989 analysis file developed by MPR from SIPP, 1987 and 1988 panels. The SIPP analysis file contains a sample of 22,040 households and 2,843 households eligible for food stamps.

TABLE III.9

BENEFIT RATES BY THE RATIO OF THE GROSS INCOME OF THE
FOOD STAMP UNIT TO THE MONTHLY FEDERAL POVERTY LEVEL:
JANUARY 1989

Income as a Percentage of Poverty	Benefits Paid to Participating Households (in Millions)	Potential Benefits for Eligible Households (in Millions)	Benefit Rate
Total ≤ 100	$903.1	**$1,251.4**	72.2 %
0	87.7	99.6	88.1
1-50	439.0	558.8	78.6
51-100	376.4	593.0	63.5
Total > 100	24.2	154.2	15.7
Total	927.4	1,405.6	66.0

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for benefits issued in error. Counts of participants were distributed across subgroups of the population based on a sample of 10,514 food stamp case records from the IQCS for January and February 1989. Estimates for eligibles were derived from tabulations prepared with the January 1989 analysis file developed by MPR from SIPP, 1987 and 1988 panels. The SIPP analysis file contains a sample of 22,040 households and 2,843 households eligible for food stamps.

decline as family income increases. For example, based on 1985 SIPP data, Shiels et. al. (1990) found that the rate of participation among elderly persons eligible for SSI declined from 84 percent for those with no income, to a low of 26 percent for those whose monthly income was $500 or more.

Table III.10 presents household participation rates among those with earnings, SSI, public assistance, and unemployment compensation. The estimated participation rate for households with earnings was much lower than the overall rate (32 percent versus 56 percent) in January 1989. Recipients of unemployment compensation also participated at a lower rate (46 percent) than the total eligible population. However, because the sample size for eligible households with unemployment compensation was small, the statistical reliability of these estimates is low.

The household participation rate for food stamp households that received SSI payments--67 percent--exceeded the overall participation rate by over 11 percentage points. Households in both the numerator and the denominator of this participation rate exclude persons in states where cash is issued through the SSI program in lieu of food stamps (California and Wisconsin in January 1989).

Households that received SSI income and contained elderly persons participated in the FSP at a much lower rate than households that received SSI income and did not contain elderly persons (58 percent versus 83 percent). This finding is not surprising, since households with elderly persons tend to participate in the FSP at much lower rates than other households.

The estimates for households that receive public assistance, especially those that receive AFDC, exceeded 100 percent. These unrealistic rates are due primarily to the underreporting of AFDC receipt in SIPP (the number of AFDC recipients in SIPP was only 79 percent of an independent estimate derived from administrative data), as discussed in the Appendix. Nonetheless, other multivariate analyses have found a strong positive relationship between participation in the FSP and participation in public assistance programs (see **Allin** and **Beebout,** 1989).

TABLE III. 10

HOUSEHOLD PARTICIPATION RATES BY SELECTED
SOURCES OF INCOME: JANUARY 1989

Source of Income	Number of Participating Households (in Thousands)	Number of Eligible Households (in Thousands)	Household Participation Rate
Earned Income	1,383	4,277	32.3 %
SSI	1,401	2,093	67.0
Elderly in the unit	789	1,351	58.4
No elderly in the unit	612	741	82.6
Public Assistance[a]	3,640	3,009	121.0
AFDC	2,899	2,381	121.7
Other welfare	791	748	105.7
Unemployment Compensation	157	343	45.6
Total	7,037	12,689	55.5

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for ineligible participants. Counts of participants were distributed across subgroups of the population based on a sample of 10,514 food stamp case records from the IQCS for January and February 1989. Estimates for eligibles were derived from tabulations prepared with the January 1989 analysis file developed by MPR from SIPP, 1987 and 1988 panels. The SIPP analysis file contains a sample of 22,040 households and 2,843 households eligible for food stamps.

'Public assistance refers to Aid to Families with Dependent Children (AFDC), General Assistance (GA), and local means-tested programs, such as Emergency Assistance.

C.   THE CHARACTERISTICS OF ELIGIBLE NONPARTICIPANTS

The preceding sections focused on households that participated in the Food Stamp Program. This section focuses on households that were eligible for the FSP but did not participate.

In January 1989, about 5.7 million of the 12.7 million households eligible for the FSP were not participating, as shown in Table III.1 1. These households tended to have relatively high incomes and were entitled to relatively small benefits. Among all eligible nonparticipating households--

0   More than one-half had incomes above the poverty level.

•   Almost 40 percent were eligible for a relatively small monthly benefit--l percent to 25 percent of the maximum ($20 on average).

As shown earlier in this paper and in other research (Doyle, 1990), those who are eligible for lower benefits tend to participate in the FSP at lower-than-average rates. Thus, these results are not surprising. These characteristics of nonparticipating eligibles also serve as further evidence that the program is targeted effectively at those whose need is comparatively greater.

Most nonparticipating households contained either an elderly member (two-thirds of whom lived alone) or a working member (most of whom had children) in January 1989. These characteristics also are consistent with the findings in this paper that participation among households with elderly (29 percent) and earners (32 percent) is below average. Most nonparticipating households reside in metropolitan areas (69 percent).

More than half of the eligible nonparticipating households (56 percent) had income above the poverty level, but about 44 percent had income below the poverty level. Overall, about 21 percent of all nonparticipating households were eligible for the maximum allotment. In previous estimates (for 1985 and 1988) it was assumed that most of the nonparticipating households eligible for the maximum allotment were households with zero gross income--a group with measurement and classification problems. However, only about 10 percent of the nonparticipating households eligible for the maximum benefit in 1989 have zero gross income. Most of the nonparticipating households

TABLE III. 11

THE CHARACTERISTICS OF ELIGIBLE NONPARTICIPATING HOUSEHOLDS
ABOVE AND BELOW POVERTY: JANUARY 1989

	Percent Distribution of Eligible Nonparticipating Households[a]		
	Below Poverty	Above Poverty	Total
Benefit Level as a Percentage of Maximum Allotment			
1-25%	3.5 %	35.4 %	38.9 %
26-50	8.1	14.2	22.3
51-75	8.8	3.3	12.1
76-99	4.5	0.8	5.3
100	19.5	1.9	21.4
Total	44.4	55.6	100.0
Composition			
Elderly Present	25.5	30.4	55.9
Living alone	15.5	21.0	36.4
Living with others	10.0	9.4	19.5
Nonelderly Households with			
Earnings	23.6	21.0	44.6
With children	17.3	14.0	31.3
Without children	6.3	7.0	13.3
Metropolitan Status			
Inside metropolitan area	27.6	41.8	69.5
Outside metropolitan area	16.8	13.7	30.5
Total	44.4	55.6	100.0
Eligible Nonparticipating			
Persons (in thousands)	6,135	6,562	12,697
Households (in thousands)	2,512	3,141	5,653
Benefits (in millions)	$348	$130	$478

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for ineligible participants. Counts of participants were distributed across subgroups of the population based on a sample of 10,514 food stamp case records from the IQCS for January and February 1989. Estimates for eligibles were derived from tabulations prepared with the January 1989 analysis file developed by MPR from SIPP, 1987 and 1988 panels. The SIPP analysis file contains a sample of 22,040 households and 2,843 households eligible for food stamps.

NOTE: Eligible nonparticipants are computed as the difference between eligibles and participants.

[a]Percentage may not sum to 100 due to rounding error.

eligible for the maximum benefit (almost 75 percent) have positive gross incomes and relatively high expenses that make them eligible for the maximum benefit. For reasons that are not clear, many of the eligible households with high expenses chose not to participate. Table III.12 shows the characteristics of those nonparticipating households in poverty that were eligible for the maximum benefit.

Table III.13 shows the 'overall demographic and economic characteristics of eligible nonparticipating households in January 1989. Overall, about half of the eligible nonparticipating households consisted of a single adult, and 56 percent contained elderly member(s). Just under one-third contained children, and over two-thirds were headed by a white non-Hispanic individual. The eligible nonparticipating households with children (32 percent) were almost evenly divided into those headed by a single female (14 of 32 percent) and those headed by two or more adults (16 of 32 percent). Only 2 percent of the eligible nonparticipating households with children were headed by a single male.

TABLE III.12

THE CHARACTERISTICS OF ELIGIBLE NONPARTICIPATING HOUSEHOLDS BELOW POVERTY THAT ARE ELIGIBLE FOR THE MAXIMUM FOOD STAMP BENEFIT: JANUARY 1989

	Eligible Nonparticipating Households Below Poverty that are Eligible for Maximum FSP Benefit	
	Population (in Thousands]	Distribution of Households
Composition		
Elderly Present	409	37.8 %
Living alone	264	24.4
Living with others	145	13.4
Nonelderly Households with Earnings	234	21.6
With children	102	9.5
Without children	132	12.2
Nonelderly Households without Earnings	438	40.5
With children	369	34.1
Without children	69	6.4
Income as a Percentage of Poverty[a]		
0	115	10.7
l-50	601	55.6
51-100	365	33.8
Metropolitan Status		
Inside metropolitan area	747	69.1
Outside metropolitan area	334	30.9
Total Households	1,081	100.0

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for ineligible participants. Counts of participants were distributed across subgroups of the population based on a sample of 10,514 food stamp case records from the IQCS for January and February 1989. Estimates for eligibles were derived from tabulations prepared with the January 1989 analysis file developed by MPR from SIPP, 1987 and 1988 panels.   The SIPP analysis file contains a sample of 22,040 households and 2,843 households eligible for food stamps.

NOTE: Eligible nonparticipants are computed as the difference between eligibles and participants.

*Percentages may not sum to totals due to rounding error.

TABLE III.13

DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS OF ELIGIBLE
NONPARTICIPATING HOUSEHOLDS: JANUARY 1989

	Population (in Thousands)	Distribution of Households
Household Size[a]		
1	2,846	50.4 %
2	1,070	18.9
3	564	10.0
4	424	7.5
5	349	6.2
6+	400	7.1
Household Contains:[b]		
Elderly	3,160	**55.9**
Elderly living alone	2,060	36.4
Disabled	475	8.4
Disabled under age 60	35	0.6
Children under age 18	1,794	31.7
Children ages 5 to 17	1,478	26.1
Single female with children	790	14.0
Single male with children	83	1.5
Two or more adults with children	907	16.0
Single nonelderly and nondisabled adult	198	3.5
White non-Hispanic head	3,910	69.2
Black non-Hispanic head	837	14.8
Hispanic head	886	15.7
Income as a Percentage of Poverty[a]		
Total ≤ 100%	2,512	44.4
0	115	2.0
1-50	348	6.2
51-100	2,048	36.2
Total > 100%	3,141	55.6
Household Income Includes:[b]		
Earnings	**2,895**	51.2
SSI	**692**	12.2
Unemployment compensation	187	3.3
Metropolitan Status		
Inside metropolitan area	**3,927**	**69.5**
Outside metropolitan area	1,726	30.5
Total Households	5,653	100.0

SOURCES: Counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for ineligible participants. Counts of participants were distributed across subgroups of the population based on a sample of 10,514 food stamp case records from the IQCS for January and February 1989. Estimates for eligibles were derived from tabulations prepared with the January 1989 analysis file developed by MPR from SIPP, 1987 and 1988 panels. The SIPP analysis file contains a sample of 22,040 households and 2,843 households eligible for food stamps.

NOTE: Eligible nonparticipants are computed as the difference between eligibles and participants.

[a]**Percentages** may not sum to totals due to rounding error.

[b]**Percentages** do not sum to 100 because households may exhibit more than one of the characteristics listed. Note that the elderly and the disabled categories are not mutually exclusive.

IV. CHANGES IN PARTICIPATION **RATES** FROM 1985 TO 1989

Persons interested in FSP policy often wish to know whether participation rates have risen or declined over time. While it is unreasonable to expect 100 percent participation among the eligible population, knowing how the rate of participation has changed over time allows policymakers to understand the program's relative success at reaching the eligible population. This chapter examines changes in participation rates across three points in time: August 1985 (based on Doyle, **1990),** January 1988 (based on Trippe and Doyle, **1992),** and January 1989 (based on this report). It also discusses the major reasons for the observed changes in the rates. Although it is difficult to make broad generalizations about trends based only on three points in time, it is possible to understand the short-term changes in the rates.

Participation rates change when the rate of growth in the number of participants differs from the rate of growth in the number of eligibles. Changes in FSP legislation, economic conditions, and other programs affect the rate of growth among participants and eligibles, thus effecting changes in participation rates. Since these influences often occur simultaneously, it is difficult to sort out their separate effects on participation rates. Usually, one of the influences dominates the others, causing participation rates to change in a particular direction. Sometimes, however, different influences work in opposite directions, cancelling out any single effect on the rates.

We used a consistent data base and methodology to derive the participation rates for all three years. Hence, the three rates are directly comparable.' Specifically, we derived all three participation rates from FSP administrative counts of participants for the numerator and from **SIPP-**based estimates of eligibles for the denominator.

'The SIPP file used to produce the January 1989 rates contains more information necessary for determining program eligibility, thus improving estimates on the number of eligible households.

A. CHANGES IN AGGREGATE FSP PARTICIPATION RATES

Participation rates in the FSP declined slightly between August 1985 and January 1988, but remained constant between January 1988 and January 1989. As shown in Table IV.1, participation rates for individuals fell by 5 percentage points between 1985 and 1988, but remained at about 59 percent between 1988 and 1989. Similarly, rates for households fell by about 3 percentage points from 1985 to 1988, but remained at about 56 percent from 1988 to 1989. Finally, rates of benefit receipt as a percentage of total potential benefits fell by almost 9 percentage points from 1985 to 1988, but remained at between 67 and 66 percent between 1988 and 1989.

Participation rates declined between August 1985 and January 1988 because the number of eligibles increased substantially, while the number of participants remained constant. However, participation rates remained constant between January 1988 and January 1989 because neither the number of eligibles nor the number of participants changed much from January 1988. The reasons for the shift in rates between 1985 and 1988 and for the steady rates between 1988 and 1989 are described in more detail in Section IV.C.

Table IV.1 shows that the benefit participation rate in all three years was substantially higher than both the individual participation rate and the household rate, and that the individual rate was higher than the household rate. This consistent pattern across time indicates that households with higher benefit levels, and thus greater need, are more likely to participate than households with lower benefit levels. It also implies that larger households are more likely to participate than smaller households. This finding is consistent with other research (for example: Doyle, 1990; Allin and Beebout, 1989; and Ross, 1988).

B. CHANGES IN PARTICIPATION RATES BY DEMOGRAPHIC AND ECONOMIC SUBGROUPS

In this section, we discuss how participation rates for subgroups of the eligible population have changed relative to participation rates for the total eligible population between 1985 and 1989.

TABLE IV.1

COMPARISON OF PARTICIPATION RATES FOR 1985, **1988,** AND 1989

	August 1985			January 1988			January 1989		
	Participants (in Thousands)	Eligibles (in Thousands)	Participation Rate	Participants (in Thousands)	Eligibles (in Thousands)	Participation Rate	Participants (in Thousands)	Eligibles (in Thousands)	Participation Rate
Individuals	18,560	**28,884**	64.3%	18,286	30,973	59.0%	18,344	31,041	59.1%
Households	6,894	11,604	59.4	6,882	12,292	56.0	7,037	12,689	55.5
Benefits	**$807,265**	**$1,072,262**	75.3	$890,158	**$1,334,779**	66.7	$927,391	**$1,405,636**	66.0

SOURCE: January 1989 counts for participants are from the Food Stamp Program Statistical Summary of Operations, adjusted for ineligible participants and benefits issued in error. Estimates for eligibles were derived from tabulations prepared with the January 1989 analysis file developed by MPR from SIPP, 1987 and 1988 panels. The SIPP analysis file contains a sample of 22,040 households and 2,843 households eligible for food stamps. August 1985 values and rates are from Table 1 of Doyle **(1990),** and January 1988 values and rates are from Table IV.1 of Trippe and Doyle (1992).

Although the ***absolute*** participation rates of some subgroups are much larger or smaller than those of the total population, the ***direction*** of the change in the rates among most subgroups over time is consistent with the direction of the change among the total population. These comparisons are discussed below.

1. Changes among Demographic Subgroups

Participation rates among most subgroups of the eligible population declined slightly between August 1985 and January 1988, just as overall participation rates fell during this time period (Table IV.2). Participation rates for two subgroups, households containing single persons and households containing two or more adults with children, fell slightly more than average (by 5 percentage points and 8 percentage points, respectively, compared to 3 percentage points overall). While declines in the rates among these two groups are higher than average, they are not surprising given that households with single persons and households with two or more adults with children were among those exhibiting the largest increases in new eligibles under the 1985 FSA (see Section IV.C). Three types of households shown in Table IV.2 exhibited an increase in participation rates between 1985 and 1988: (1) households with disabled persons under age 60, (2) households with single female adults with children, and (3) households with single male adults with children.

Between January 1988 and January 1989, participation rates changed very little among many of the subgroups, just as they changed very little among the total population. For example, participation rates for households with children, single persons, and white non-Hispanic heads remained constant between 1988 and 1989. However, participation rates for households containing elderly persons and households containing two or more adults with children continued to decline, while participation rates for households containing disabled persons under age 60 and single parents continued to rise.

The drop in participation rates (by 6 percentage points) for households containing elderly persons between 1988 and 1989 is largely due to a substantial (11 percent) increase in the number of eligible households containing elderly persons combined with a small decrease in the number of

TABLE IV.2

COMPARISON OF HOUSEHOLD PARTICIPATION RATES BY
SELECTED DEMOGRAPHIC CHARACTERISTICS:
AUGUST 1985, JANUARY 1988, AND JANUARY 1989

Demographic Characteristics	August 1985	January 1988	January 1989
Household Contains:			
Elderly age 60 or Older	37.3%	35.0%	**29.0%**
Disabled under age 60	46.7	55.2	57.4
Children under age 18	73.9	71.3	70.1
Children ages 5 to 17	NA	68.3	68.2
Single person	49.8	45.0	44.7
Single female adult with children	74.8	75.5	77.5
Single male adult with children	45.9	55.8	56.7
Two or more adults with **children**[a]	75.3	66.8	60.5
White non-Hispanic head	48.9	46.9	45.9
Black non-Hispanic head	77.1	76.0	76.9
Hispanic head	54.8	54.2	50.5
Total	59.4	56.0	55.5

SOURCES: January 1989 rates are from Table III.4 of this report. August 1985 rates are from Table 2 and Table 4 of Doyle (1990), and January 1988 rates are from Table IV.3 of Trippe and Doyle (1992).

[a]This category includes both households in which the gender of the household head is unknown and female-headed households that contain two or more adults.

Note: Changes in **rates** between 1988 and 1989 may reflect changes in the SIPP questionnaire used to gather the **data. See,** for example, page 36 for a discussion of reasons for the change in participation rates for households containing elderly persons.

participating households with elderly persons. There are three factors contributing to the rise in the number of eligible households, First, the total number of low-income households (households with incomes less than 185 percent of the poverty level) containing elderly persons increased between 1988 and 1989 based on SIPP data (by about 4 percentage points). Second, the proportion of income-eligible households containing elderly persons that passed the asset test in the SIPP data increased between 1988 and 1989 (from 61 percent to 65 percent). These first two factors account for about 9 percentage points of the 11 percent increase. The remaining 2 percentage points of the increase in the number eligible households containing elderly persons may be due to the increase in the number of eligible households receiving the medical deduction (from 8.2 percent to 13.8 percent) in the SIPP data between 1988 and 1989. The increase in the proportion of households receiving the medical deduction and passing the asset test may in part be attributed to the change in the SIPP questionnaire design in 1989. The design change, which included the new eligibility module in the 1989 SIPP, resulted in more direct measures of deductible expenses and changes in measures of vehicular assets (see Appendix). Thus, the overall decrease in the participation rate for the elderly is due to a combination of actual changes among this population and changes in the design of the SIPP questionnaire. The next estimates of participation rates will help determine whether the trend of falling rates among elderly households is a measurement issue or is actually happening in the population, since these estimates will again be based on the expanded SIPP information.

In all three years, participation rates among households with elderly persons, single persons, and white non-Hispanic heads are lower than overall participation rates. This pattern is consistent with results found in earlier research (see Trippe and Doyle, 1992). Conversely, in all three years, participation rates among households with children, single female adults with children, and black non-Hispanic heads are consistently higher than overall rates.

2. **Changes among Economic Subgroups**

Participation rates among most economic subgroups shown in Table IV.3 declined slightly between August 1985 and January 1988, just as overall rates fell during this time period. For **example,** participation rates among households with income in poverty, earnings, or public assistance declined by 3 to 5 percentage points between 1985 and 1988. However, participation rates among households with SSI income increased between 1985 and 1988 (by 9 percentage points). The increase in rates among households with SSI income is driven largely by the increase in rates among households containing disabled persons as shown in Table IV.2.

Overall participation rates did not change between January 1988 and January 1989 (from 56.0 percent to 55.5 percent). However, rates among some economic subgroups did change. In fact, participation rates among many of the subgroups in 1989 moved back to levels close to their 1985 rates. For example, participation rates for households with income in poverty or public assistance (rates that declined between 1985 and 1988) moved back up in January 1989 to levels close to the August 1985 rates. Similarly, participation rates for households with SSI income (rates that increased between 1985 and 1988) moved back down in January 1989 to levels close to the August 1985 rates.

In 1985, households with SSI income and *elderly* in the units were more likely to participate in the FSP than households with SSI income and **no** *elderly* in the unit. In 1988 and 1989, this pattern reversed: SSI households with no elderly in the unit were more likely to participate than households with elderly in the unit. The higher FSP participation rates for SSI households containing no elderly in the unit in 1988 and 1989 may be due to changes in the SSI program causing an increase in the proportion of nonelderly SSI recipients over the proportion of elderly SSI recipients, with little or no change in the proportions of elderly and nonelderly SSI eligibles (U.S.-Department of Health and Human Services, 1987-1989, and conversations with Social Security Administration staff).

Participation rates by monthly benefit levels as a percentage of the maximum allotment show a consistent pattern of increase in all three years as the monthly benefit level rises to 99 percent of the

TABLE IV.3

COMPARISON OF HOUSEHOLD PARTICIPATION RATES BY SELECTED ECONOMIC CHARACTERISTICS: AUGUST 1985, JANUARY 1988, AND JANUARY 1989

Economic Characteristic	August 1985	January 1988	January 1989
Monthly Benefit Level as a Percentage of Maximum Allotment			
1-25%	30.0%	29.9%	31.9%
2650%	58.3	61.5	51.1
51-75%	86.0	68.7	72.8
7699%	89.1	91.0	83.4
100%	64.3	50.5	52.8
Income as a Percentage of Poverty			
Total ≤ 100%	74.6	70.2	72.2
0	69.0	70.0	82.2
1-50	92.7	78.5	86.5
51-100	67.2	66.5	64.8
Total > 100	14.8	16.8	14.2
Source of Income			
Earned income	36.8	33.9	32.3
SSI:	65.7	75.0	67.0
Elderly in the unit	66.6	70.3	58.4
No elderly in the unit	64.1	82.6	82.6
Public assistance:	115.5	110.5	121.0
AFDC	118.5	112.5	121.7
Other welfare	97.4	98.9	105.7
Unemployment compensation	75.6	46.4	45.6
Total	59.4	56.0	55.5

SOURCES: January 1989 rates are from Tables III.6, III.8, and 111.10 of this report. August 1985 rates are from Table 2 and Table 4 of Doyle (1990), and January 1988 rates are from Table IV.4 of Trippe and Doyle (1992).

NOTE: Changes in rates between 1988 and 1989 may reflect changes in the SIPP questionnaire used to gather the data.

maximum. However, the rates in all three years drop by 25 to 41 percentage points when potential benefits rise from 76 to 99 percent of the maximum allotment to 100 percent of the maximum.

As expected, participation rates in all years were much higher for households with income below the poverty level than for households with income above the poverty level. Participation rates for households in poverty were 14 to 17 percentage points ***higher*** than average, while rates for households not in poverty were 39 to 45 points ***lower*** than average. Participation rates were consistently lower than average for households with earnings (ranging from 22 to 23 percentage points lower than average).

3. **Changes Among Eligible Non-participating Households**

Table IV.4 shows that the distribution of eligible households that did not participate in the FSP has followed a consistent pattern in all three years. That is, the largest proportion of eligible nonparticipating households in 1985, 1988, and 1989 were households that contained elderly persons (about half), white non-Hispanic heads (over two-thirds), with incomes over the poverty level (over half), earnings (about half), or were eligible for small benefits (one-third to one-half were eligible for 1 to 25 percent of the maximum benefit allotment). As expected, these household types tended to have lower-than-average participation rates in all three years.

Although the overall distribution of nonparticipating households is consistent over the three years, there were some small variations over the time period. For example, for some subgroups, the proportion of eligible nonparticipating households changed after implementation of the **FSA** in 1988, but returned to levels close to those of 1985 in 1989. For example, the proportion of eligible nonparticipating households with elderly declined slightly in 1988 but increased in 1989. Similarly, the proportion of nonparticipating households with incomes above the poverty level declined slightly in 1988 and increased in 1989 to a level slightly above that of 1985. On the other hand, eligible nonparticipating households with disabled persons have been dropping steadily since 1985 (and participation rates for this group have been increasing since 1985).

TABLE IV.4

COMPARISON OF THE DEMOGRAPHIC AND ECONOMIC
CHARACTERISTICS OF ELIGIBLE NONPARTICIPATING HOUSEHOLDS:
AUGUST 1985, JANUARY 1988, AND JANUARY 1989

	Percent Distribution of Eligible Nonparticipating Households		
	August 1985	January 1988	January 1989
Household Contains:[a]			
Elderly age 60 or older	52.7 %	48.0 %	**55.9 %**
Elderly living alone	32.4	29.6	36.4
Disabled under age 60	11.5	9.4	8.4
Disabled living alone	3.7	2.1	0.6
Children under age 18	30.5	31.3	31.7
Children ages 5 to 17	NA	27.6	26.1
Single person	49.6	49.5	50.4
Single female with children	17.1	15.1	14.0
Single male with children	2.4	1.8	1.5
Two or more adults with children	11.0	14.4	16.0
Single nonelderly and nondisabled adult	NA	8.1	3.5
White non-Hispanic head	73.2	68.9	69.2
Black non-Hispanic head	15.8	14.8	14.8
Hispanic head	12.4	13.8	15.7
Income as a Percent of Poverty			
Total ≤ 100%	46.7	49.7	44.4
0	4.5	3.8	2.0
l-50	3.9	10.2	6.2
51-100	38.3	35.7	36.2
Total **>** 100%	53.4	50.3	55.6
Benefit as a Percentage of Maximum Allotment			
1-25%	54.8	43.1	38.9
26-50%	19.5	15.7	22.3
51-75%	5.8	15.2	12.1
7699%	3.8	2.6	5.3
100%	16.2	23.4	21.4
Household Income Includes:			
Earnings	49.3	51.1	51.2
SSI	14.4	8.8	12.2
Unemployment compensation	1.3	3.4	3.3
Total Households	100.0	100.0	100.0
Eligible Nonparticipating			
Persons (in thousands)	10,323	12,686	12,697
Households (in thousands)	4,711	5,410	5,652
Benefits (in millions)	$265	**$445**	$478

SOURCES: January 1989 percentages are from from Tables III.11 and III.13 of this report. August 1985 percentages were derived from Table 12 of Doyle (1990) and January 1988 percentages are from Tables III.11 and III.13 of Doyle and Trippe (1992).

NOTE: Eligible nonparticipants are computed as the difference between eligibles and participants.
Changes in percents between 1988 and 1989 may reflect changes in the SIPP questionnaire used to gather the data.

*Percentages do not sum to 100 because households may exhibit more than one of the characteristics fisted.

NA = These values were not produced in the August 1985 estimates.

C. REASONS FOR CHANGES IN FSP PARTICIPATION RATES FROM 1985 TO 1989

As discussed, participation rates declined between August 1985 and January 1988 but remained steady between January 1988 and January 1989. This section examines the major reasons for the decline in participation rates between 1985 and 1988 and for the stability of the rates between 1988 and 1989. It also examines the reasons for any particularly large or unexpected changes in rates among certain subgroups. Specifically, we discuss how the major legislative, economic, and other program changes affected the number of participants and eligibles between 1985 and 1989, thus effecting the changes in rates. We also discuss any possible effects that the improvement in the SIPP data have on participation rates.

1.   Changes In Food Stamp Program Legislation

The decline in participation rates between 1985 and 1988 was due largely to an expansion in the number of eligibles induced by legislation passed by Congress, combined with little or no change in the number of participants. The most substantial expansions in the number of FSP eligibles were due to the more generous eligibility criteria introduced under the 1985 Food Security Act (FSA), implemented in 1986. Among other changes, the 1985 FSA (1) granted automatic eligibility to households in which all members receive AFDC or SSI; (2) raised the dollar amount of countable assets that could be owned by households without elderly persons and by households with elderly living alone and still qualify for food stamps; and (3) raised the earnings deduction rate. All of these changes were modeled in the 1988 SIPP eligibility model, thus increasing the total number of eligibles. The 1987 Stewart B. **McKinney** Homeless Assistance Act introduced minor expansions in **eligibility** and in participation by encouraging homeless persons to obtain food stamp eligibility and benefits.

As discussed in Trippe and Doyle **(1992)**, the more generous eligibility criteria introduced under the 1985 FSA increased the number of total eligible households by 7 percent in January 1988. However, the participation rate for the newly eligible households was very low--only 6 percent,

compared with 56 percent for all eligible households. Thus, although the FSA legislation expanded eligibility for the FSP, most of those who became eligible did not participate. In addition, the economy was expanding between 1985 and 1988, further reducing the number of participants.

Most of the newly eligible households were made eligible by the expanded asset provisions, particularly for households that contained single elderly persons. About 40 percent of the newly eligible households contained single elderly persons.   Slightly over half of the newly eligible households did not contain elderly; most of them contained children. Thus, it is not surprising that the largest declines in participation rates between 1985 and 1988 were among households that contained elderly persons, single persons, and two or more adults with children.

For several reasons it is also not surprising that most of the newly eligible households did not participate in the year and a half after the new provisions were implemented: (1) households containing elderly, single persons or two parents have historically participated at much **lower-than-** average rates and have received lower-than-average benefits; (2) while the impact of the provisions was immediately reflected in estimates of the size of the eligible population, the more generous eligibility criteria were relatively subtle (thus, awareness of the changes may not have been very widespread among the newly-eligible population); and (3) the economy was still expanding between 1985 and 1988, thus creating an environment in which those eligible for small benefits were less likely to seek assistance.

Between January 1988 and January 1989, the FSP program changed very little, and the number of eligibles and participants increased only slightly. The 1988 Hunger Prevention Act legislated minor additional expansions in eligibility and benefit levels, which, among other changes: **(1) increased the** dependent care deduction from $160 per household to $160 per dependent; (2) expanded the definition of disabled; and (3) excluded advanced EITC payments as income. The data base allowed us to model only the expansion in the dependent care deduction in simulating the number of eligibles. However, we found no noticeable increase in the number of eligible households with dependents **due**

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to this change in legislation. The Hunger Prevention Act may have had some influence on the increase in the number of participants in January 1989, but most of the effect on participants is probably seen after 1989.

2. **Changes in the Economy**

The economy grew steadily between August 1985 and January 1988 and continued to grow through January 1989. For example, the national unemployment rate declined from 7.1 percent in August 1985 to 5.8 percent in January 1988 and to 5.4 percent in January 1989. Similarly, the poverty rate declined from 14.0 percent in 1985 to 13.0 percent in 1988 and to 12.8 percent in 1989. The economy did not begin to weaken at the national level until early 1990.

In general, during a growing economy, the number of FSP eligibles and participants may decline both because more persons find jobs and increase their income, thus becoming ineligible for food stamps, and because fewer eligibles choose to participate in the program. Thus, the growing economy between 1985 and 1988 may have reduced the number of participants. However, any downward pressure on the number of eligibles from the growing economy was swamped by the expansionary effects of the 1985 FSA, as discussed earlier.

Despite the continued strong economy between January 1988 and January 1989, the number of eligible and participating households increased slightly (by between 2 and 3 percent) during that time. The slight increase in participants during a period of economic growth may be explained in part by factors identified by McConnell (1991). McConnell found that certain areas of the country experienced a deteriorating economy as early as 1988. For example, most of the New England states felt the effects of a recession during fiscal year 1988.

In summary, the overall impact of the economy on participation rates between 1985 and 1989 was probably very small. The impact of the expansionary program changes implemented under the 1985 FSA probably swamped most of the effects of the growing economy on the number of eligibles

between 1985 and 1988, and the pockets of recession and growth in the Medicaid program probably reversed any decline in the number of participants and eligibles between 1988 and 1989.

3.   **Changes in the Medicaid Program**

In addition to changes in FSP legislation and shifts in the economy, changes in other programs that are closely associated with the FSP may also affect the number of participants and eligibles. For example, expansions to the Medicaid program initiated in the late 1980s may have increased the number of participants in the FSP.

Medicaid expansions during the late 1980s may have brought more people to the FSP by encouraging newly eligible Medicaid recipients to join the FSP. Legislative changes in the Medicaid program included raising the income eligibility threshold, and encouraging states to increase their outreach programs and streamline their application processes. The result of these changes was to strengthen the link between participation in the Food Stamp and Medicaid programs. According to research conducted by McConnell (1991), many of the newly eligible Medicaid recipients were already eligible for food stamps but did not apply for food stamps until they applied for Medicaid. McConnell estimated that the increase in the number of Medicaid households accounts for about 40 percent of the total increase in the number of households that entered the FSP between FY 1987 and FY 1990.

4.   **Changes in the SIPP Questionnaire**

As discussed in the Appendix, changes in the SIPP questionnaire design in 1989 may have contributed to the increase in the number of eligible households containing elderly persons, and the consequent drop in participation rates among households with elderly between 1988 and 1989. These changes include more complete medical expense information and changes in the collection of vehicular assets.

D. PROGRAM GROWTH SINCE JANUARY 1989

FSP caseload data show that the number of FSP participants has been climbing steadily since spring 1989. More than 6 million more people were receiving food stamps in December 1991 than in January 1989. Such factors as a weak economy suggest that the number of eligible persons has also risen since 1989. However, until the SIPP survey data for this time period are available, we cannot estimate by how much the number of eligibles increased since 1989. Due to changes in the Census Bureau's schedule for administering topical questions on program eligibility for the SIPP data needed to estimate participation rates, the next available estimate of food stamp eligibility will be for January 1992. These data should be available by mid-1993. If the surge in participants is coming from the pool of previously nonparticipating eligibles, or grows at a faster rate than the eligible population, then FSP participation rates will rise from 1989.

E. CONCLUSIONS

This chapter has examined the major changes in participation rates between August 1985 and January 1988, and between January 1988 and January 1989. The downward shift in participation rates between August 1985 and January 1989 was due to two major factors: (1) expansions in the eligible population brought about by the more generous eligibility criteria implemented under the Food Security Act of 1985; combined, with (2) the lack of participation among the newly eligible under the 1985 FSA due to the historically lower-than-average participation rates for the groups most affected, the relatively subtle nature of the expansions, and the growing economy. The decline in participation rates was greatest among subgroups of the population that exhibited the greatest increase in newly eligibles: households with elderly and single persons.

Participation rates remained steady between January 1988 and January 1989, largely because there were no significant program changes. The number of participants and eligibles grew slightly, but at about the same rate. The total number of eligible and participating individuals increased by less than 1 percent, and the total number of eligible and participating households grew by between

2 and 3 percent. Despite the growing economy nationally during this period, there were pockets of recession around the country that may have exerted upward pressure on the number of participants and eligibles in some areas. Furthermore, expansions in Medicaid may have increased the number of participating households slightly.

The surge in the number of participants since spring 1989 may increase the participation rate after 1989, particularly if the growth in the participants comes from a pool of previously nonparticipating eligibles.

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APPENDIX

**TECHNICAL PROCEDURES USED TO COMPUTE PARTICIPATION RATES
IN JANUARY 1989**

As noted in the text, we derived the participation rates in this study by comparing administrative data on program participation with survey data on program eligibles. This appendix provides detailed information on how we constructed the numerators and the denominators.

A. USING ADMINISTRATIVE DATA TO ESTIMATE THE NUMBER OF PARTICIPANTS

One reason for the disparities in previous estimates of **FSP** participation rates (as noted earlier) is that household survey respondents report their own participation--data that are known to be substantially underreported. For example, the U.S. Department of Commerce (1986) estimated that, on average, 92 percent of the households that received food stamps from October to December 1984 reported receiving food stamps (representing 84 percent of total food stamp benefits) in the SIPP data during that period.

The estimates of the numerator in the rates reported in the text are based on administrative data derived from three sources.   The first source is the Program Operations data, which contain information on the number of persons and households that are issued benefits and the total dollar value of the coupons issued for January 1989. The Program Operations statistics are presented by state, allowing us to adjust the totals to estimate the caseload residing in the **50** states and the District of Columbia, the population reflected in SIPP.

The second data source is the Integrated Quality Control System (IQCS). We used this source to adjust the Program Operations statistics to eliminate ineligible participants and erroneous benefits which could not be captured in the SIPP-based estimates of eligibility. The number of participating households in FY **1988** Program Operations data was adjusted downward by 2.37 percent to eliminate ineligible households. Similarly, total benefits reported in the Program Operations data were adjusted to correct for erroneous benefit payments to ineligible households and for under and over payments to eligible households (net reduction of 4.73 percent.)

The third data source is a sample of food stamp case records from the January'and February 1989 IQCS samples. We used the sample of case records to calculate the distribution of persons, households, and benefits across various demographic and economic characteristics.

B. USING SIPP TO ESTIMATE THE NUMBER OF ELIGIBLES

We used a multi-step process to derive our estimates of the FSP-eligible population in January 1989. First, using SIPP data, we developed an analysis file that reflected the U.S. population as of January 1989. We then used this file to simulate program eligibility, a process whereby we quantified the program rules defined in the Chapter II and applied them to each dwelling unit in the data base. For each dwelling unit we also estimated its composition, eligibility status, and potential benefits. Section B.l summarizes how we developed the analysis file, and section B.2 assesses the outcome of the eligibility simulation.

1. Developing the Analysis File

SIPP is a nationally representative longitudinal survey of adults in the United States that provides detailed monthly information on income, program participation, and wealth. It is a multipanel longitudinal survey to which replacement panels are added each year. Each panel contains information on persons in a longitudinal sample followed for a period of two years or more. The longitudinal sample consists of adults age 15 or older who reside in a cross-sectional sample of dwelling units in the United States.   These adults, along with other individuals with whom they resided, are interviewed every four months.   In each round of interviewing (or "wave"), a core questionnaire **collects** information on each of the four months preceding the interview date. In most waves, the monthly core questions are supplemented with questions on a variety of topical issues that vary from wave to wave. Because the interviewing process is staggered, the reference period that is covered in any given wave is not the same for all sample members.

Although the survey is longitudinal, it is designed to support cross-sectional estimates for Census households that reside in the 50 states and the District of Columbia. For this analysis, we derived cross-sectional estimates of food stamp-eligible households from Wave 7 of the 1987 panel and Wave 4 of the 1988 Panel. We adjusted the sample weights to allow us to base eligibility estimates on combined panels. Although the two waves were independent samples of the U.S. population, their reference periods overlapped. That is, they sampled the population in the month of January, making their reference periods comparable with the administrative data used for the denominator. Together, the two waves provide a relatively large sample size (22,040 households).

The 1987 Panel Wave 7 and the 1988 Panel Wave 4 represent the first time that the Census Bureau administered a set of topical questions in SIPP focused on determining program eligibility. Until this time, information on deductible expenses, disability and assets was imbedded in a series of topical modules administered in different waves. Thus, the information had to be integrated across time and with the core. This integration presented conceptual and operational problems in developing food stamp eligibility measures in previous participation rate estimates, as discussed in the Appendix of Trippe and Doyle (1992).

The newly designed eligibility module meant that we no longer had to integrate shelter and child care expenses and asset information across time because they were all collected simultaneously in the new eligibility module. Also, we no longer had to impute out-of-pocket medical expenses because this information was collected in the new topical module. Finally, we no longer had to impute the sharing of shelter expenses among household members because this was now collected. Hence, the new waves contain most of the information needed to estimate food stamp eligibility: measures of monthly income; monthly Census household composition; assets, medical, child care, and shelter expenses; and disability status.

The more complete medical expense information and changes in the collection of vehicular assets may have contributed to the unexpectedly large increase in the number of eligible households

containing elderly persons, as discussed in Chapter IV. The estimated proportion of eligible households receiving the medical deduction increased from 8.2 percent in January 1988 to 13.8 percent in January 1989, and the amount of the estimated average medical deduction among eligible households more than doubled, from $7.58 to $18.28. Higher medical deductions are likely to increase the number of eligible elderly because their resulting net incomes are likely to be lower. The proportion of households with elderly passing the asset test increased from 61 percent to 65 percent in 1989.

Although the two waves contain most of the information needed to estimate food stamp eligibility, there were three operational problems to address in building the file due to the design of the eligibility topical module: (1) the topical module omitted questions on vehicular equity; (2) some individuals were present in the sample in January but not at the time of the interview; for those persons no information was collected on vehicles or deductible child care and shelter expenses; and (3) questions on reasons for receiving government transfers needed to determine food stamp disability status were not administered in the topical module. We corrected for these omissions as follows:

- We imputed vehicular equity for all cars reported by the members of the January sample.

- For those adults who were present in January but not present at the time of the interview, we imputed vehicular assets, equity, and deductible child care and shelter expenses.

- We merged selected data from Wave 1 in each panel to the person extracts in order to more accurately determine food stamp disability status.

A report by Mathematica Policy Research, Inc. **(1992) provides more detail on how we developed** the analysis file used to simulate the FSP.

2. An Assessment of tbe Eligibility Simulation

The procedure used to estimate the eligible population was designed to replicate the eligibility determination process for each household on the SIPP analysis file as closely as possible. In other words, we applied the program eligibility and benefit criteria outlined earlier to each household as if it had actually applied for food stamps.

The newly designed eligibility module contains more information on the variables necessary for determining **FSP** eligibility and benefits than ever before. The additional information on deductible expenses, disability, and assets--all in the same wave--means that many of the measurement problems of the previous SIPP files have been solved. However, some problems remain. All the simulation procedures described earlier cannot perfectly replicate the eligibility and benefit determination process mandated in the legislation, despite the improvements in the SIPP data, and the adjustments and enhancements that we made to the data. The specific discrepancies are as follows.

- *Unit definition.* Because SIPP does not measure the complete set of characteristics that are used to determine a food stamp unit (especially information on which dwelling-unit members customarily purchase and prepare food together), the simulated food stamp household is not the same as the unit determined by the food stamp caseworker. For this study, we used the reported program unit composition in Census households that reported FSP benefits to simulate the food stamp household. In other dwelling units with cash assistance, the food stamp household was equal to the cash assistance unit plus any spouses or related children under age 18 in the dwelling. In all other dwelling units, the simulated food stamp household was the same as the Census household. Landa (1987) and Doyle and Dalrymple (1987) discuss using SIPP to construct food stamp households.

- Countable *assets.* We used the financial, nonfinancial, and vehicular assets reported in SIPP to estimate countable assets according to program rules. However, SIPP does not explicitly provide all the measures necessary for this purpose, such as cash on hand and vehicular equity.

- *Gross income. The* measure of gross income used in this study is 'close to, but not precisely the same as, gross income reported to the food stamp caseworker. First, survey data on income and program participation, such as the data collected in SIPP, tend to be underreported. For example, the number of AFDC recipients in SIPP was only 79 percent of an independent estimate derived from administrative data; the number of recipients of unemployment compensation was 101 percent of the benchmark; and the number of recipients of veterans' benefits was 80 percent of the benchmark (U.S. Department of Commerce, 1986). Second, the definition

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of income for purposes of food stamp eligibility is not precisely the same as income measured in SIPP. For example, the Food Stamp Program counts net **self-**employment earnings averaged over a period of up to one year, whereas SIPP measures self-employment draw. Third, as noted earlier, unit composition simulated with SIPP data differs from the caseworker's determination of the food stamp household, and, hence, aggregated income for the food stamp household may differ as well.

- *Net income.* Estimates of net income are more accurate in this file than in previous files because out-of-pocket medical expenses were collected for the first time (rather than imputed), and deductible expenses were collected at the same time as other eligibility information. Nonetheless, the measure of net income for this file is not exactly the same as net income measured by the caseworker because the SIPP definitions of shelter and dependent-care expenses differ slightly from the FSP definitions. For example, utility expenses are not disaggregated by use (heating, cooling, telephone) which affects the application of the standard utility allowance.

- *Disability status.* We relied on reported disability and reported income receipt as specified under the program to determine disability. Reporting and measurement errors in SIPP may somewhat distort the number of disabled individuals identified in this manner.

- *Measurement en-or.* Several forms of nonsampling errors affect the eligibility simulation, including the underreporting of income and program participation noted earlier, and the misclassification of benefit and income types. Of particular concern is the existence of persons who report participation in SSI or public assistance programs at the same time that they report income or assets in excess of the eligibility limits for those programs (that is, "seemingly-ineligible" participants).

Table Al shows the possible bias due to each of these measurement and reporting errors. The net result on estimates of the number of eligibles is uncertain. Underreporting of gross income will bias the estimates of eligible households upward, since more households will appear to have met the income limits than actually did. Also, under the automatic eligibility provision of the Food Security Act of 1985, households comprised entirely of "seemingly-ineligible" SSI or public assistance participants are treated as eligible for food stamps even though their income and assets exceed food stamp eligibility limits. To the extent that the income or asset measure of these seemingly ineligibles (as opposed to the participation measure) is correct, the number of food stamp eligible households is overstated.

TABLE Al

FACTORS THAT AFFECT THE SIMULATION OF FOOD STAMP
ELIGIBILITY WITH SIPP, AND THE
DIRECTION OF THE BIAS

Source of Error	Effect on Estimates of the Number of Eligibles
Unit Definition	Underestimate
Countable Assets	Overestimate
Gross Income	
Underreporting	Overestimate
Definition	Underestimate
Program participation underreporting and misreporting	Underestimate of eligibles participating in other programs
Net Income	Unknown
Disability Status	Underestimate
Measurement Error	Unknown
Inconsistencies between income and program participation	Overestimate

On the other hand, the imprecise measures of some types of expenses may bias the measurement of net income upward, thus reducing the estimate of the number of eligible households. Finally, the underrepresentation of some groups of individuals biases the estimates of eligibles downward. As illustrated earlier, the SIPP data seem to significantly underrepresent households that receive public assistance. These households form a large portion of the eligible and participating populations. Thus, some of the participation-rate estimates for these households exceed 100 percent.

Doyle (1990) analyzes the impact of selected measurement and reporting errors on measures of food stamp eligibility.